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MANPOWER RESEARCH PROJECTS SPONSORED BY THE U.S. DEPARTMENT OF LABOR, MANPOWER
ADMINISTRATION, THROUGH JUNE 30, 1966.

Office of Manpower Policy, Evaluation, and Research (DOL), Washington, D.C.

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Contracts and grants sponsored under the Manpower Development and Training Act of 1962, as amended, are described. Included are (1) contracts awarded to universities, individuals and private organizations during the fiscal year 1966, (2) contracts initiated before July 1, 1965 but carried over to 1966, (3) long-range research programs initiated in 1966 by seven colleges and universities, and (4) small grants providing support to Ph.D. candidates writing theses and specialists examining manpower topics. The contract number, the contractor and principal staff, the title, objectives and procedure, and status are given for each project. A subject index and an index to contractors and grantees are included. Reports of projects completed since 1962 are listed with their availability shown. Guidelines to be used in applying for contracts, grants for doctoral dissertations, and grants for research projects are included in the appendixes. (PS)

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MANPOWER RESEARCH PROJECTS

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U.S. DEPARTMENT OF LABOR,
MANPOWER ADMINISTRATION**

**Through
June 30, 1966**

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**U.S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary**

MANPOWER ADMINISTRATION
Office of Manpower Policy, Evaluation, and Research
Curtis C. Aller, Director

**U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTRODUCTION

For the past 4 years the Department of Labor has conducted a program of manpower research under authority granted by the Manpower Development and Training Act of 1962, as amended. This research, which is supported through grants and contracts, is performed by researchers in the many disciplines which touch upon manpower problems. The Office of Manpower Research of the Office of Manpower Policy, Evaluation, and Research (OMPER) has developed and administered the research program within the Department's Manpower Administration.

The manpower research program of OMPER has been developed on the premise that its research should contribute to three major objectives: (1) Improvement of the Department's operational programs; (2) development of new perspectives and solutions to manpower problems; and (3) early warning of emerging problems. With these objectives in mind, manpower studies have been approached broadly. Projects supported have been concerned not only with economic aspects but with social, cultural, and educational matters as well.

Since the inception of the program, research emphasis has been placed on many persistent and continuing manpower problems: The impact of continuing technological changes on employment, the large increases in the number of young workers entering the labor force each year, the growth in the nonwhite labor force, the high rates of unemployment and underutilization in some areas accompanied by labor shortages in others, and the continued shift of workers from rural areas to urban centers. Increasing emphasis is being given to occupational needs and adjustments, to the special problems of migratory farmworkers, to the lack of jobs and inadequate occupational preparation and training in urban "ghettoes," to problems of skill shortages created by rising military requirements, and to the long-term problem of wasted human resources in rural areas. Other significant research undertaken includes studies of various methods and techniques used by employers to adjust to growing skill shortages, the development of information on the nonparticipation of eligible workers in the labor force, and the search for solutions to the employment problems of disadvantaged groups such as older workers and the handicapped.

In order to provide the broadest possible base for its program, the Department has attempted to utilize researchers from a variety of disciplines, from academic, public, and private research organizations. Applications for contracts are accepted from universities, State and local government agencies, and other organizations or individuals with research capabilities in the manpower area. Grants are available only to universities or other nonprofit organizations and their employees.

This report lists the contracts and grants sponsored by OMPER since the inception of its research program. Projects are grouped according to whether they are grants or contracts.

New projects for which contracts were awarded in fiscal year 1966 are listed by contractor and summarized in Part 1 of the report. Part 2 covers contracts which were carried over to FY 1966 but originated before July 1, 1965. Since the beginning of the program, 136 projects have been contracted.

Part 3 contains descriptions of each of the Manpower Research Institutional Grants. This activity of the manpower research program was inaugurated in 1966. Seven grants were awarded during FY 1966 to colleges and universities to enable them to develop and execute long-range research programs and research training activities.

The small grant program, which was initiated late in FY 1965, has grown rapidly. During its first full year of operation, it provided 34 grants in support of Ph. D. candidates writing their theses on manpower topics and 31 grants to support a wide variety of research projects in the manpower field. These are described in Parts 4 and 5, respectively.

Through the small grants program both new and established researchers have been drawn into the field of manpower studies. These have come from many disciplines—the larger number from economics, sociology, and industrial relations, but with representation also in business administration, psychology, education, anthropology, and other fields.

Results of completed research sponsored by the manpower research program have been utilized in planning action programs and for background in making policy decisions. A number of projects have resulted in the publication of books or monographs. Part 6 lists completed projects. Libraries and field locations at which copies of contractors' reports may be consulted are shown in appendix A.

Guidelines to be used in applying for contracts, grants for doctoral dissertations, and grants for research projects are included as appendixes B, C, and D, respectively.¹

A list of the members of the Subcommittee on Research of the National Manpower Advisory Committee, which has guided the Department in its research program, is included as appendix E.

Not listed in this publication are contracts for experimental and demonstration projects, which are supported by OMPER under a separate program.

For information on that program, on specific projects mentioned in this document, or on the contract or grant programs, write to: Director, Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, Washington, D.C. 20210.

¹ Guidelines for Manpower Research Institutional Grants are not included because funds currently available do not permit support of any additional institutions under this program.

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PART 1.

CONTRACTS INITIATED IN FISCAL YEAR 1966

This section describes the contracts awarded to universities, individuals, and private research organizations during the last fiscal year.

Contract No.: 81-09-66-27

Contractor: Bureau of Social Science Research, Inc.
Washington, D.C.

Principal Staff: Mrs. Laure M. Sharp.

Project Title: Occupational Adjustment of Recent Low-Income Southern Immigrants to Cleveland

Objectives and Procedures: This project will study the occupational adjustment in Cleveland of low-income southern immigrants with less than 2 years of residence, and compare their experiences with those of long-term residents. The first phase of the study will include the collection of information obtained by personal interviews with 500 families, the analysis of this information, and the identification of the study subjects and the types of occupational adjustment services to be provided them during the second phase. The second phase will consist of an experimental counseling and training program. The third and final phase will be a followup assessment of occupational adjustment.

In addition, the effectiveness of using school and other records for rapid location and identification of newcomers to the city will be investigated as a means of acquainting newcomers with the various programs and services which would assist their adjustment and assimilation in the urban community.

Status of Project: The report on the first phase, the baseline study, is tentatively scheduled for mid-1968. Arrangements for the development of the second and third phases are presently being made.

Contract No.: 81-05-66-23

Contractor: University of California at Berkeley
Institute of Engineering Research and
Institute of Industrial Relations
Berkeley, California

Principal Staff: Dr. E. R. F. W. Crossman, Dr. Stephen Laner.

Project Title: An Evaluation of the Skill Demands of Manufacturing and Service Processes at Various Levels of Technology

Objectives and Procedures: This study supplements the data acquired in the contractors' study, "Evaluation of Changes in Skill-Profile and Job Content Due to Technological Change: Methodology and Pilot Results from the Banking, Steel, and Aerospace Industries."

The primary objective of both projects is to facilitate a better understanding of changes in the structure of the work force due to advancing technology. This is attempted through investigation of changes in the distribution of skill levels in the manufacturing and service work force as related to technological change. A secondary objective is to develop a technologically based taxonomy of tasks and skills related to production processes.

Using a technique tested by the researchers in the pilot study, further industries will be studied with reference to direct (production) labor and supervision in maintenance, planning, scheduling, quality control, and junior management. Analysis of the relationship between human and machine functions, together with a study of industrywide statistical data, will guide the selection of representative case material.

Status of Project: Completion of the project is scheduled for spring 1967.

Contract No.: 81-05-66-30²

Contractor: University of California at Berkeley
Institute of Industrial Relations
Berkeley, California

Principal Staff: Dr. Lloyd Ulman, Dr. Margaret S. Gordon.

Project Title: Entry and Job Changing in a Large Metropolitan Labor Area

Objectives and Procedures: The study will analyze changes in current and projected labor demand and

²This project is being jointly sponsored by the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, and the Office of Education, U.S. Department of Health, Education, and Welfare.

supply and processes of adjustment to these changes in the San Francisco Bay Area, with a view to determining their impact on educational requirements and employment opportunities, by age, education, race, and occupation.

Primary orientation will be toward basic labor market analysis. Specific components of the project will include: (1) Analysis of published and unpublished statistical data relating to the characteristics of the San Francisco labor area and to changes in labor demand and supply in the area; (2) a survey of employer policies and practices, including a mail questionnaire directed to approximately 1,000 firms and interviews with a selected subsample of about 100 to 150 firms; (3) a survey of union policies and practices, including interviews with a selected sample of 100 to 150 union representatives in the Bay Area; (4) a survey of employment agencies, placement services, and junior college counselors; (5) a study of labor mobility, based on a sample survey of some 2,000 households in the Bay Area; and (6) studies of the impact of automation on skill requirements, to be based partly on information obtained in the employer survey and partly on more specialized studies related to the overall project.

Status of Project: Work began in early 1966 and will continue for a 5-year period.

Contract No.: 81-23-66-03

Contractor: Cambridge Center for Social Studies
Cambridge, Massachusetts

Principal Staff: Joseph M. Becker, S.J.

Project Title: An Investigation of Supplementary Unemployment Benefit Plans

Objectives and Procedures: This exploratory study will investigate several issues through informal discussions and unstructured interviews with selected employers to determine the following: (1) The circumstances under which various Supplementary Unemployment Benefit (SUB) plans come into existence; (2) the chief modifications reflecting operating experience that have been made in SUB provisions; and (3) the actual experience of employers and workers under the plans, in terms of monetary and nonmonetary effects, as compared with the stated objectives of the plans.

Status of Project: Data collection and analysis have been completed and a final report is in preparation. The project is expected to be completed in late 1966.

Contract No.: 81-09-66-10

Contractor: Bureau of the Census
U.S. Department of Commerce
Washington, D.C.

Principal Staff: Allen D. Manvel.

Project Title: Pretest Survey on Occupations and Educational Backgrounds of State and Local Government Employees

Objectives and Procedures: The objective of the study is to provide information on the feasibility of developing new occupational information on the characteristics of nonteaching personnel employed in the various functions of State and local governments.

The study includes two related surveys. Initially, there will be a personal canvass of a sample of approximately 40 local governments of different size groups to obtain information on employees identified by agency of employment. This is to serve as a basis for functional classification. There will then be a mail canvass of the listed individual employees to obtain data on age, sex, education, duration of public employment, and related information.

These pretest surveys will provide information which will assist in the preparation of a report on the feasibility and probable cost of a large-scale survey to provide detailed data on the 4 million nonteaching persons who are full-time employees of State and local governments.

Status of Project: Surveys are underway and completion of the project is scheduled for late 1966.

**Contract Nos.: 81-34-66-02
and 81-34-66-29**

Contractor: Columbia University
New York, New York

Principal Staff: Dr. Eli Ginzberg.

Project Title: Manpower Resources and Economic Growth

Objectives and Procedures: The objective of this continuing series of studies is to identify and analyze various economic sectors in order to determine the role of manpower resources in the expansion of the economy.

Status of Project: Final drafts of two reports on manpower expansion, "Manpower Resources and Nuclear Power" and "The Expansion of Producers' Services," have been completed and will be available in book form in late 1966. Work is continuing on "State Employment Efforts to Expand Employment," which will be an attempt to assess at a subnational level governmental and private efforts to influence the quantity and quality of employment within particular regions; and on "The Hard to Employ," which describes the range of policies and programs for the unemployed and the underemployed when the economy is at or near full employment.

Four additional studies will be in progress during fiscal 1967:

1. "Paramedical Manpower and the Expansion of the Health Services Industry" will identify the key determinants of changes in the supply of such personnel with particular reference to the types of persons recruited; accreditation and licensing; market forces, including wages and working conditions; and promotion and career opportunities.

2. "The Process of Work Attachment Among Non-college Men" will categorize diversified work attachment experience of noncollege men between the ages of 17 and 30 years and will include interviews with employers to ascertain their manpower policies applying to recruitment, assignment, training, promotion, and dismissal.

3. "The Peripheral Labor Force" will relate, through historical, statistical, and economic analyses, the changing structure in the demand for goods and services, and the degrees of attachment to the labor force of different groups of workers.

4. "Employment Growth Patterns: A Regional Analysis" will cover major changes in the structure of employment by counties over the decades 1940-50 and 1950-60, by specifically accounting for job creation and job destruction as well as for major linkages that underlie each.

Highlights of Findings: "Manpower Resources and Nuclear Power" emphasizes the crucial role of highly qualified personnel in the development of a new technology, and the critical role of government in providing appropriate personnel in the early developmental

period of this activity. Failure to secure an adequate core of such personnel could result in excessively high costs of development.

"The Expansion of Producers' Services" points out the growing tendency of employers to reduce their regular manpower requirements by contracting for such services. The report discusses the growth of the producers' services sector and the factors contributing to its rise. It examines the nature of its labor force, including such factors as sex and race, occupational characteristics, range of educational attainment, and earnings.

Contract No.: 81-09-66-12

Contractor: Bureau of Employment Security
U.S. Department of Labor
Washington, D.C.

Principal Staff: Alfred L. Green.

Project Title: Role of the Employment Service in Selected Western European Countries in Implementing an Active Manpower Policy

Objectives and Procedures: The role and effectiveness of the employment services in Western European countries (France, Germany, Great Britain, the Netherlands, and Sweden) in the implementation of an active manpower policy are being studied. Information was secured through interviews with employment service and related officials in Europe during the summer of 1966. The administrative and operational aspects of national employment services which contribute to active manpower policies were emphasized in the interviews.

Status of Project: Completion of the project is scheduled for late 1966.

Contract No.: 81-09-66-19

Contractor: The George Washington University
Washington, D.C.

Principal Staff: Dr. Regis H. Walther.

Project Title: A Study of the Effectiveness of Selected Out-of-School Neighborhood Youth Corps Programs

Objectives and Procedures: One of the purposes of the Neighborhood Youth Corps (NYC) is to increase the employability of disadvantaged youth by providing counseling, remedial education, work experience, and training. This study is confined to the nonrural NYC programs for youth who are no longer in school, and will attempt to evaluate the effectiveness of these programs through in-depth followup studies using experimental and control subjects.

The aims of the study are to determine the potential value of the NYC through control group comparisons and to evaluate selected program elements in four cities. It is hoped that the study will not only provide information on program effectiveness, but will make a contribution to the methodology for evaluating youth programs.

Status of Project: Field work is currently in progress. A preliminary report is scheduled for January 1967 and the final report is expected June 1967.

Contract No.: 81-34-66-33

Contractor: Greenleigh Associates, Inc.
New York, New York

Principal Staff: Arthur Greenleigh.

Project Title: A Study of Unemployed Adults in a Tight Labor Area

Objectives and Procedures: This study is designed to identify the characteristics of a sample of unemployed but employable adults in a community with a tight labor supply and to determine their employment-related needs, problems, and service requirements.

From a sample of 1,400 households—1,000 selected from poverty areas, 200 recipients of public assistance, and 200 registered with the employment service—the study will seek through structured interviews to: (1) Identify the population of presumably employable yet unemployed adults; (2) ascertain their social, economic, vocational, employment, educational, training, and health characteristics; (3) assess their employment-related problems, their needs and their potential for employment; and (4) determine the services and action programs necessary to increase their employability and reduce their unemployment.

* The project is being jointly sponsored by the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor and the Office of Economic Opportunity.

Status of Project: Completion is scheduled early in 1967.

Contract No.: 81-23-66-22

Contractor: Harvard University
Cambridge, Massachusetts

Principal Staff: Dr. John Dunlop, Dr. Peter B. Doeringer.

Project Title: Internal Adjustments in the Manufacturing Sector to Tightening Labor Markets and Skill Shortages

Objectives and Procedures: This is a case study investigation of the experience of 20 medium to large manufacturing plants in adjusting to diminishing labor supplies and skill shortages. The plants will be located in the Northeast and North Central States and will be selected equally from among five industries currently experiencing expanding employment opportunities. Personal interviews are to be conducted with upper level corporate and local plant management personnel and with industrial engineers involved in job design. Data will be collected on such activities as recruiting, hiring, training, wage determination, etc.

Eight of the plants will be studied in depth. In these plants, personnel executives, industrial engineers, in-plant equipment designers and selected lower level management personnel will also be interviewed to measure over time the impact of the approaches used in adjusting internally to changing labor supply conditions. These additional interviews will seek quantitative data which reflect the effects of a transition from a loose to tight labor supply on variables such as total employment, numbers of job classifications and incumbents, numbers and descriptions of jobs redesigned, compensation, training, hours of work, and promotion opportunities.

Status of Project: Completion is scheduled for fall 1968.

Contract No.: 81-15-66-17

Contractor: Illinois Institute of Technology
Chicago, Illinois

Principal Staff: Dr. Thomas J. McNichols, Dr. Elmer H. Burack.

Project Title: Management and Automation

Objectives and Procedures: This project will develop information on the effects of improvements in industrial technology on the activities and job requirements of managers and supervisors, including: (1) The effect of technological change on supervisory and managerial jobs; (2) new personnel skills, educational experiences, or individual characteristics that may be required of supervisory and middle-management workers as a consequence of updating in their manufacturing technologies, and the influence on manpower planning of changes in personnel requirements; and (3) technological changes which may have affected the activities and duties of technical support groups to the extent that supervision and middle management are also affected.

Two types of approaches will be combined to disclose interrelated details of technological-managerial changes. Four companies will be studied in depth utilizing records, interviews, questionnaires, and observations. In addition, 40 companies will be surveyed on a more limited basis. All companies will be selected by size and level of technology and will be located in the Midwestern States.

Status of Project: Completion is scheduled for September 1967.

Contract No.: 81-09-66-15

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: William Gerber.

Project Title: Study of Wage and Hour Standards as Applied to Bona Fide Trainees in Other Countries

Objectives and Procedures: An in-depth study will be made of how other countries handle government-set standard provisions and those agreed to through collective bargaining for bona fide on-the-job trainees. The researcher will also examine the economic aspects, administrative practices, and social structure of areas where wage and hour standards are applied to training programs. In addition to information from secondary sources, information will be sought through a questionnaire sent to labor attachés and labor reporting officers at selected U.S. overseas posts.

Status of Project: Completion of the project is scheduled for mid-1967.

Contract No.: 81-09-66-07

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: Gertrude Bancroft McNally.

Project Title: Pilot Survey of Volunteer Service Work

Objectives and Procedures: The study will test the feasibility of obtaining national data on the numbers and types of persons doing unpaid volunteer work, and on the amounts of time contributed by unpaid volunteer workers in such activities.

The required information has been collected through individual questionnaires filled out by members of approximately 4,000 households as a supplement to the November 1965 *Current Population Survey*.

Status of Project: Completion of the tabulation and analytical phases of this project is scheduled for late 1966.

Contract No.: 81-09-66-05

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: Norman J. Samuels.

Project Title: Pretest of a Survey of Manufacturing Employer Expenditures During 1965 for the Formal Training of Nonsupervisory Employees

Objectives and Procedures: This pretest was an exploratory effort designed to test the feasibility of a full-scale study of employers' costs of formal training and the number of persons trained, by broad occupational categories. The pretest of 20 firms had two main objectives: (1) To determine the availability of data from employer records; and (2) to test two questionnaire forms in securing the data. Both forms were identical except for the scope of the definition of formal training. Cost data sought included wages and salaries, payments to outside organizations, transportation and living expenses, and training equipment, facilities and devices.

Status of Project: The project was completed and a report was submitted in March 1966.

Highlights of Findings: None of the companies participating in the pretest could provide all the information requested. Some firms could provide partial information from employee records or other sources but, in general, the format of employer accounting records did not permit ready isolation of costs by type of expenditure and occupational group. Moreover, the majority of firms with extensive formal training programs were unable to report the number of individual employees participating in one or more training programs. A full-scale survey involving the methods tested does not appear feasible.

Contract No.: 81-09-66-08

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: Edgar Weinberg.

Project Title: Job Redesign for Older Workers

Objectives and Procedures: The objectives of the study are to ascertain the existence of specific cases of job redesign for older workers in American plants, and to obtain detailed information about these instances in terms of the type of jobs and workers involved, the kinds of changes that have been made, and the benefits, costs, and problems resulting from job redesign.

A mail canvass of 500 companies located possible cases of job redesign which might be studied more intensively through personal visits. Intensive studies were then made of the 10 companies with job redesign experiences related to the problems of older workers. A team of investigators visited each company and interviewed plant officials.

Status of Project: A preliminary report has been received, and the final report is scheduled for late fall of 1966.

Contract No.: 81-24-66-14

Contractor: The Lafayette Clinic
Detroit, Michigan

Principal Staff: Dr. Albert F. Ax.

Project Title: Validation of a Physiological Test of Aptitude for Learning Social Motives

Objectives and Procedures: This study will seek to relate motivation, an important element in achievement, to physiological responses to various stimuli in order to develop and validate tests which may be helpful in selecting and assigning persons for training.

The aptitude for learning social motives, and therefore motivation itself, is acquired. Since the autonomic nervous system (ANS) controls most bodily processes which accompany motivation, it is believed that there is a relationship between ANS characteristics and achievement of individuals. For example, the conditioning of physical responses to specific stimuli may affect both motivation and achievement of individuals. Thus, it has been already demonstrated that there are relationships between life achievement and individual differences in the conditioning of palmar sweating responses to different sounds.

Conditioning to other autonomic processes will be applied to several populations including MDTA trainees. The influence of the ANS on the learning and performance of the trainees will be separated out of the total matrix of education, intelligence quotients, relevant experience, and psychiatric and other influencing variables. Using these approaches, this study is expected to provide the following results: (1) A practical test of aptitude for learning new motives which may help to assign trainees appropriately and may help fit the training to the needs of the person; (2) an approach to the objective measurement of current motivation during performance; and (3) a contribution to the understanding of motivational development.

Status of Project: The final report is scheduled for 1967.

Contract No.: 81-24-66-32

Contractor: Michigan State University
Rural Manpower Center
East Lansing, Michigan

Principal Staff: Dr. Harvey M. Choldin, Grafton Trout.

Project Title: The Mexican-American Migrant Farmworker in Transition

Objectives and Procedures: This study will describe the process by which Mexican-American migrant farmworkers drop out of the migrant stream, settle in northern communities and adjust to new labor force

requirements and opportunities. It will also delineate factors affecting the settling-in process and stabilization of migrant workers in selected communities, with specific attention to occupational aspects and income regularization.

Personal interviews will be held with 700 migrants and 100 community leaders in selected "dropout" areas focusing on demographic information, occupational background, motivation for dropping out of the migrant stream, kinship and friendship ties, job aspirations, interest in training and retraining, community reactions, etc.

Status of Project: Completion of the study is scheduled for mid-1968.

Contract No.: 81-40-66-18

Contractor: National Analysts, Inc.
Philadelphia, Pennsylvania

Principal Staff: Dr. Aaron J. Spector.

Project Title: A Study of the Year-Round and Summer Neighborhood Youth Corps Program for In-School Students

Objectives and Procedures: The Neighborhood Youth Corps (NYC) offers "summer only" and "year-round" programs directed towards in-school youth between the ages of 16 and 22 years who come from low-income families. The summer NYC program consists essentially of 10-12 weeks of paid work experience (32 hours per week) administered under professional guidance and supervision. The year-round program provides, in addition to summer work, continuing work of approximately 15 hours a week during the school term.

This study will evaluate the relative effectiveness of the "year-round" and "summer only" programs. It will also evaluate the effects of these programs measured against the situation of the in-school youth eligible for but not able to enter an NYC program.

Samples of NYC "year-round" and "summer only" in-school enrollees in two cities, as well as a control group of youth who met the requirements and who applied but were not enrolled due to lack of NYC positions, will be selected. Measurements of attitudinal and behavioral changes will be based on interviews with the enrollees and the control group held at various times—at the start of the summer, prior to any NYC

work experience, at the end of the summer programs, and again the following January. Interviews will also be held with a sample of parents of the NYC enrollees. Other measures of the effectiveness of the programs will be based on an analysis of school records and juvenile delinquency records.

Status of Project: Detroit, Mich. and Cincinnati, Ohio, have been selected as the research sites and the first interviewing of the enrollees has been completed. A preliminary report is scheduled to be ready in January 1967 and the final report in May 1967.

Contract No.: 81-34-66-28

Contractor: National Educational Television and Radio Center
New York, New York

Principal Staff: Henry C. Alter.

Project Title: Choice: Challenge for Modern Women

Objectives and Procedures: This contract makes available a series of programs for national distribution among educational television stations. The series is entitled "Choice: Challenge for Modern Women." It was produced by the University of California Extension Service and consists of 12 half-hour programs on the wide range of career choices open to women. It is anticipated that broader dissemination of this information will promote fuller use of the Nation's trained womanpower.

The films and a syllabus discussion guide to the series will be made available to the 105 stations affiliated with educational television at nominal cost.

Status of Project: The project is scheduled for completion by late 1966.

Contract No.: 81-34-66-13

Contractor: National Industrial Conference Board, Inc.
New York, New York

Principal Staff: Dr. Daniel Creamer.

Project Title: Role of Job Vacancies—Case Study of Rochester, New York, in 1965

Objectives and Procedures: This project will evaluate the usefulness of job vacancy data for better understanding of how labor areas operate. Four series of analyses will be made of data relating to the Rochester area:

1. *Stability of job vacancy statistics.* A study will be made of the variation over time in the total number and composition of job vacancies by employer, occupation, industry, and other relevant groupings. The data used will be based on 392 employers, each of whom reported job vacancies in February, May, and August 1965. The seasonal impact on job vacancy variability will be determined as well as the duration of the vacancy and educational and experience requirements.

2. *Job vacancies, labor turnover and growth of the firm.* This analysis will measure the extent to which the number of job vacancies reported by a firm can be explained by the firm's growth, wage levels, average hours worked, and accessions and separations. A model based on these variables will be developed.

3. *New hires, overtime, and transfers.* A key element in the hiring decision is the expense of hiring and training new workers. Hiring cost data already compiled for Rochester firms will be used to construct and measure an economic model of the hiring process which employs hiring costs as a critical factor in the choice between the use of overtime and the hiring of new employees, as well as the related decision as to the occupational level at which to hire.

4. *Some imbalances—structural and institutional.* This analysis will determine whether the number of unemployed has been less, equal to, or greater than the number of job vacancies. It will also show how many of the unemployed have the educational and experience qualifications required to fill the job vacancies reported by employers.

For each of these four studies, at least one article will be prepared and published in addition to a summary report.

Status of Project: A final report is scheduled for spring 1967.

Contract No.: 81-09-66-31

Contractor: National Manpower Policy Task Force
Washington, D.C.

Principal Staff: Dr. Frederick Harbison, Dr. Garth L. Mangum.

Project Title: Identifying Needs and Priorities in Manpower Research

Objectives and Procedures: Current manpower information will be reviewed and assessed in relation to the need for new and changing manpower policies, programs, and research. This will be accomplished through liaison with government and the research community, and through the preparation of special papers and reports on the state of knowledge on priority policy issues.

Status of Project: The project is expected to run through fiscal year 1968.

Contract No.: 81-09-66-16

Contractor: National Science Foundation
Washington, D.C.

Principal Staff: Dr. John K. Folger.

Project Title: Symposium on Manpower Theory

Objectives and Procedures: The symposium is designed to explore the usefulness of current theories of career choice, manpower supply and demand, and occupational and professional recruitment. Changes of substantial magnitude are anticipated in future demands for scientific and professional personnel, and in the supply of persons with advanced education. The symposium will determine the value of current social science concepts in planning for the future demand and supply situation for highly educated manpower. The relevance of current theories to the structure of manpower policies and the design of manpower research will also be analyzed.

Status of Project: The symposium will be conducted November 3-5, 1966. A report of the symposium is scheduled for early 1967.

Contract No.: 81-34-66-25

Contractor: New York University
New York, New York.

Principal Staff: Dr. Daniel E. Diamond.

Project Title: A Study of the Relationship of Industry Hiring Practices to the Employment of Disadvantaged Groups

Objectives and Procedures: This study is designed to compare formal and informal hiring requirements with actual job performance needs in a number of occupations, and to investigate the characteristics and employability of jobseekers from disadvantaged groups who are capable of meeting actual job performance requirements. The study is expected to cover 15 to 20 occupations in a minimum of 3 areas in different parts of the country.

Status of Project: Completion is scheduled for late 1967.

Contract No.: 81-38-66-20

Contractor: Oklahoma State University of Agriculture and Applied Science Research Foundation
Stillwater, Oklahoma

Principal Staff: Dr. Barry A. Kinsey, Dr. Larkin B. Warner, Dr. Robert L. Sanmeyer.

Project Title: The Determinants of Labor Force Participation Rates in the Ozark Low-Income Area

Objectives and Procedures: This study is concerned with an exploration of various factors associated with labor force participation rates in a rural low-income area. It is designed to serve as a foundation for a further project (involving a field survey) which will identify more specifically the differences in social and economic characteristics which lead to variations in labor force participation. The survey work will utilize an instrument or set of instruments combining the questionnaires from the Current Population Survey of the Bureau of the Census with supplemental questions aimed at exploring the factors affecting an individual's labor force status. The ultimate objective is to use the information developed from this project and the subsequent field survey project to evaluate existing manpower policies as they apply to rural low-income areas, and to recommend programs aimed at alleviating general underutilization of human resources in such areas.

Status of Project: The project is in its initial phase. Completion is scheduled for July 1967.

Contract No.: 81-40-66-24

Contractor: Dr. Frank C. Pierson
Swarthmore College
Swarthmore, Pennsylvania

Principal Staff: Dr. Frank C. Pierson.

Project Title: Preparation of Material on Professional and Supporting Personnel for the 1967 President's Manpower Report

Objectives and Procedures: A study of professional and supporting personnel will be made for use in the 1967 Manpower Report. The study will cover current and prospective labor supply and demand, training and retraining, utilization (including utilization of subprofessional personnel), educational and other hiring specifications in relation to actual job requirements, salaries, working conditions, and promotional opportunities as they relate to labor supply, utilization, and worker mobility.

Status of Project: Completion is scheduled for late 1966.

Contract No.: 81-05-66-11

Contractor: Stanford University
Institute for the Study of Human Resources
Stanford, California

Principal Staff: Dr. Joseph Katz, Dr. Harold A. Korn, Dr. Max M. Levin.

Project Title: Decision Process and Determinants in Occupational Choice

Objectives and Procedures: This study is concerned with a 2-year investigation of the occupational decision process and the determinants of occupational choice. The impact of the following factors on the occupational decision is to be studied: (1) Influential persons; (2) occupational information and experience; (3) motivations and attitudes to work and career; (4) personality characteristics; and (5) socioeconomic status.

In the first year 1,200 subjects randomly selected from two different student populations are to be studied for vocational interest, aptitude, and personality characteristics. Especially constructed questionnaires will be used. About 240 randomly selected subjects are to be given intensive interviews to expand the information obtained from the psychometric instruments and the questionnaires. In the second year the same psychometric instruments will be readministered to the original 1,200 subjects and a new questionnaire will be devised to register changes in occupational choice and to elicit determinants of such changes in the intervening period of about 12 months. The same 240 subjects will be re-interviewed.

Status of Project: A final report is scheduled for the end of 1967.

Contract No.: 81-46-66-01

Contractor: University of Texas
Austin, Texas

Principal Staff: Dr. Ray Marshall.

Project Title: Negro Participation in Apprenticeship Programs

Objectives and Procedures: This study is intended to develop a series of recommendations for increasing Negro participation in apprenticeship programs. These will be based on a study of the apprenticeship situation in 10 major cities with large Negro populations where there have been significant developments concerning the problem of Negro apprenticeship. Information will be collected through unstructured interviews with Negro apprenticeship applicants, apprentices, and dropouts; with Negro and white journeymen; State and Federal apprenticeship officials; joint apprenticeship committees; and vocational counselors and other related individuals and groups. The study will seek to identify and analyze barriers to Negro participation in apprenticeship so that recommendations can be directed toward overcoming them.

Status of Project: The interviews have been completed and analyzed. The final report is being written and is scheduled for completion in late 1966.

Contract No.: 81-24-66-04

Contractor: Wayne State University
Detroit, Michigan

Principal Staff: Dr. Ross Stagner, Dr. Reuben Baron, Dr. Alan Bass.

Project Title: The Role of Social Reinforcement Parameters in Facilitating Trainee Motivation, Learning, and Job Performance

Objectives and Procedures: This project seeks to identify the motivational conditions which will enable unemployed trainees to obtain maximum benefits from job retraining programs. An individual's idea of himself affects his reactions to rewards and punishments, and is also related to how much work he will do. This research is aimed at determining what methods of dispensing social rewards will be most effective in changing the self-impression and, therefore, the subsequent job performance of trainees.

Subjects for this study will be trainees participating in ongoing projects conducted by local agencies of the Employment Service. The project is conceived as a series of interlocking laboratory and field experiments. Factors to be studied include level of past social deprivation, praise of the person versus praise of his performance, abstract versus concrete rewards, consistent versus sporadic rewarding, and the effect of rewards administered by the subject's peer group versus those administered by an authority figure (the experimenter or instructor). Dependent variables include changes in self-impression, performance in the laboratory tasks, and subsequent performance in the training situation and in jobseeking behavior and job performance.

Status of Project: A final report is scheduled for mid-1967.

Preliminary Highlights of Findings: A recent progress report offers some tentative findings. These findings concern the relative importance of praising the person (e.g. "You're pretty good") versus praising his performance on a task (e.g. "That's a good job"). The results show that praise of the person improves a trainee's performance on a task more than praise of his performance. Praise of the person is also more effective than praise of his performance in raising a trainee's self-impression.

Contract No.: 81-09-66-09⁴

Contractor: Women's Bureau
U.S. Department of Labor
Washington, D.C.

Principal Staff: Mrs. Mary Dublin Keyserling.

Project Title: Middle Atlantic Conference on Counseling Girls Toward New Perspectives

Objectives and Procedures: A pilot conference was held for key guidance and placement personnel in the

⁴The project was jointly sponsored by the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor and the Office of Education, U.S. Department of Health, Education, and Welfare.

mid-Atlantic area, to explore methods for improving counseling services for girls and young women. Emphasis was placed on the special aspects of guidance work called for by the changing social patterns which affect young women. The conference participants from six States and the District of Columbia represented a cross section of individuals and agencies active in guidance and placement work with girls in urban, suburban, and rural communities. The six States which, with the District of Columbia, were represented were Delaware, Maryland, New Jersey, New York, Pennsylvania, and West Virginia.

Status of Project: The meeting was held December 2-4, 1965, in Philadelphia, Pa., and the final report of the conference, *Counseling Girls Toward New Perspectives*, has been issued by the Women's Bureau.

PART 2.

CONTRACTS CARRIED OVER TO FISCAL YEAR 1966

Contract research initiated but not completed before July 1, 1965 is reported in this section.

Contract No.: 81-08-18

Contractor: American Association of University
Women Educational Foundation
Washington, D.C.

Principal Staff: Dr. Eleanor Dolan, Dr. Kate Hevner
Mueller, Dr. Virginia Kirkbride, Marguerite W.
Zapoleon.

Project Title: Counseling Techniques for Mature
Women

Objectives and Procedures: This project is based
on the premise that mature women, who with increasing
frequency want to enter or return to the working world
after long absences, require different types of coun-
seling than do other groups in the labor force. Specifi-
cally, they need help with occupational goals, educa-
tional requirements, and information on opportunities
in suitable occupations. The objectives of the AAUW
project are to develop techniques needed by counselors
to assist mature women entrants and re-entrants to the
labor force.

The educational phase of the project brought together
about 20 counselors who have a special interest in
working with adults or training others to do so. For
8 weeks during the summer of 1965 the participants
attended lectures, seminars, and practical demonstra-
tions related to the counseling of mature women.

Status of Project: A final report was submitted in
mid-1966.

Highlights of Findings: A draft of a manual setting
forth techniques for counseling mature women, based
on the sessions with the 20 participants, was prepared.
It contains sections on counseling problems, social and
educational changes in today's world, and economic and
occupational considerations. It also includes case
studies on counseling techniques.

Contract No.: MDTA 37-64

Contractor: American Institutes for Research
Pittsburgh, Pennsylvania

Principal Staff: Dr. J. W. Altman.

Project Title: A Study of School and Community
Factors Related to Vocational School Placement and
Employment in Trade and Industry

Objectives and Procedures: This study is expected
to generate broad recommendations for the improve-
ment of placement activities of vocational schools. It
is hoped that the final report can set forth the reasons
for differences among schools in placement and em-
ployment performance of graduates, and explain the
extent to which these factors can be controlled by the
schools.

The placement performance (defined in terms of the
rate at which graduates find jobs in the fields for which
they receive training) and the employment perform-
ance (defined in terms of the graduates' employment,
progress in earnings and promotions, job satisfaction,
etc.) of a sample of vocational schools will be meas-
ured. These measurements will be used to identify
some particularly successful and relatively unsucces-
ful schools. Interviews, questionnaires, attitude scales,
and other tools will then be used to develop data on
such school characteristics as relations with employers,
labor unions, local employment service offices, and
other community organizations.

Status of Project: Completion is scheduled for late
1966.

Preliminary Highlights of Findings: Findings in-
dicate that school activity is central to effective place-
ment but that this effectiveness depends upon the ac-
tivity's having a positive focus and the school's taking
the initiative in reaching community organizations, in-
cluding employers. Hiring policies on the part of the
companies were favorable to the schools and also con-
tributed to effective placement. This was especially
true where employers and other community groups par-
ticipated in problems of curriculum development. In
general, the graduates' satisfaction with the job fol-
lowed successful placement activity. Vocational
schools show greater success than comprehensive
schools in placing graduates.

Contract No.: 81-31-21

Contractor: Association for the Help of Retarded Children
New York City Chapter
New York, New York

Principal Staff: Ida Alpert, Jack Tobias, Dr. Jacob Cohen.

Project Title: The Employment of New York City's Mentally Retarded Adults

Objectives and Procedures: The objective of this study is to determine the current employment status of mentally retarded adults in New York City and to develop information to enhance their future success in finding jobs. Specifically the study will involve investigation of: (1) The current employment status of young adults who had been classified as retarded during their school years; (2) the employment patterns of retarded workers in terms of stability of employment, job categories, earnings, and methods of placement; and (3) the extent to which retarded persons utilize public and voluntary agencies in their efforts to find employment.

The study will survey 500 persons who have completed special education classes in the city. One-half of the group has been out of school for 2 years and the other half for 5 years. School records are to be examined, home interviews held with each subject, and psychological evaluations made of selected subgroups.

Status of Project: Completion is scheduled for early 1967.

Contract Nos.: MDTA 16-63 and 81-08-26

Contractor: Bureau of Social Science Research, Inc.
Washington, D.C.

Principal Staff: Mrs. Laure M. Sharp, Dr. Albert B. Biderman, Frank G. Davis.

Project Title: Supplementary Study of Employment of Retired Military Personnel

Objectives and Procedures: This project is comprised of two studies. The first contract, 16-63, deals with military retirees and their employment problems in undertaking second careers. The transition from

military to civilian careers of all retirees during May 1964 was investigated and detailed information developed from a subsample of 300 jobseeking retirees, in order to identify their retraining needs and problems in utilizing their skills. As the first study progressed, it was determined to enlarge the subsample and lengthen the time period. The second study (81-08-26) does so by drawing upon additional information available from the Department of Defense. Through the analysis of related data from the two studies, the later project will attempt to measure the extent to which the findings of the first study may have more general significance for all military retirees in their second careers. It is also expected that the findings of this later study may have some relevance for problems faced by the labor force in general.

Status of Project: Completion of the final report is scheduled for late 1966. Some preliminary findings were published in the May 1965 issue of *Manpower Training Facts*.

Preliminary Highlights of Findings: Prior to retirement virtually all respondents anticipated second careers, yet only 39 percent of the officers and 23 percent of the enlisted men reporting jobs waiting for them. Six months after retirement, 21 percent of the enlisted men and 17 percent of the officers were still actively seeking work. Those who were employed most often held relatively modest clerical or sales jobs. Nevertheless, long-run expectations were optimistic, even among those who still sought work.

The later study does not bear out the assumption that the high level of technical training received in the Armed Forces enhances civilian employment opportunities for military retirees. Nor are their employment difficulties primarily attributable to reluctance to relocate or to extravagant aspirations. Delays in jobseeking and possible need for retraining are the key causes for the difficulties faced by retirees. Respondents indicated a need for additional training to qualify for the first or a better job, but few had actually enrolled in training programs.

Contract No.: 81-04-05

Contractor: University of California at Berkeley
Institute of Engineering Research and
Institute of Industrial Relations
Berkeley, California

Principal Staff: Dr. Louis E. Davis, Dr. E. R. F. W. Crossman, Dr. Stephen Laner.

Project Title: Pilot Study of Evolving Jobs and Skills and Implications for Training and Education

Objectives and Procedures: This exploratory study investigated the broad outlines of job and skill changes associated with current trends in automation and other technological advances. Ten pairs of case studies conducted in the banking, steel, and metal working industries were grouped and compared in order to determine: (1) The changes produced by two or more successive levels of technological advance in the same industry or trade on the functions, tasks, and jobs within comparable groups of operators, maintenance staff, specialist-technicians, and first-line supervisors; (2) the economic justification for the changes observed in the case studies; and (3) wherever possible, comparisons of performance or ranking of individuals doing the same job with different education or training.

Status of Project: The project was completed in mid-1966 and a report entitled "Evaluation of Changes in Skill-Profile and Job Content Due to Technological Change: Methodology and Pilot Results from the Banking, Steel, and Aerospace Industries" was prepared. (See also contract no. 81-05-66-23, which supplements this project.)

Highlights of Findings: Insofar as the observed man-hour/skill changes associated with technological advance may be considered typical, they suggest the following general trends: (1) The change to more advanced technologies in the manufacturing and service industries is associated with substantial reductions in per unit direct labor requirements; (2) current technological advances cut most deeply into the medium skill-level requirements (semiskilled) with inputs at the lower levels (unskilled) having already been all but eliminated with the first level of mechanization; and (3) although there is little evidence to support the hypothesis that current technological advances significantly raise the requirements for highly skilled operating personnel, there is a tendency for the *proportion* of higher skill man-hours, and hence the mean skill level, to rise.

Contract No.: 81-04-36

Contractor: University of California at Los Angeles
Institute of Industrial Relations
Los Angeles, California

Principal Staff: Dr. Paul Prasow.

Project Title: Automated and Nonautomated Jobs in the Los Angeles Aircraft Industry

Objectives and Procedures: This longitudinal study is intended to determine: (1) The significant training and educational differences between the requirements for automated and nonautomated jobs; and (2) whether the criteria used by employers in the recruitment, selection, training, and placement of workers for automated jobs differ significantly from those for nonautomated jobs.

Data will be collected through questionnaires sent to sample groups of blue- and white-collar workers, supervisors, and union officials. Three questionnaire surveys of the same groups of individuals will be conducted at 12-month intervals. Company records will also be analyzed.

Status of Project: Completion is scheduled for June 1968.

Contract Nos.: MDTA 28-64 and 81-09-66-06

Contractor: Bureau of the Census
U.S. Department of Commerce
Washington, D.C.

Principal Staff: Stanley Greene.

Project Title: Labor Reserve

Objectives and Procedures: This project was intended to provide data from the 1960 Census of Population on the characteristics of persons who were not in the labor force at the time of the Census but who had been working or looking for work at some time between 1950 and 1960.

Status of Project: The tabulations were received in late 1965 and a report entitled *Labor Reserve* was published by the Bureau of the Census in April 1966.

Highlights of Findings: The report contains information on the occupational reservoir available for recall in 1960 in the event of a national emergency. It has information useful for analyzing the number and characteristics of unused but experienced workers in specific occupations, particularly those in scarce supply. It also contains data that should be helpful in interpreting

work-life patterns, particularly for marginal or occasional workers who frequently move in and out of the labor force. In addition, information developed on the numbers and characteristics of recently retired older persons gives an indication, by age and occupation, of the extent of "squeezing out" of the labor force.

Contract No.: MDTA 27-64

Contractor: Bureau of the Census
U.S. Department of Commerce
Washington, D.C.

Principal Staff: Stanley Greene.

Project Title: Tabulations on the Relationship Between Patterns of Child-Bearing and Labor Force Participation of Women

Objectives and Procedures: Data will be developed to provide new information on factors which influence the participation of married women in the labor force. Among these factors are the number of children and their ages, and the length of time women have been married.

For the first time, data will be available on the labor force status of women immediately subsequent to the birth of their first child. In addition, detailed data will now be available relating size of family as well as family formation patterns to the husband's income. These data should provide new insights into the labor force participation of women in different socioeconomic situations.

Status of Project: Tabulations are scheduled for delivery in late 1966.

Contract No.: MDTA 42-64

Contractor: University of Colorado
The Bureau of Economic Research
Boulder, Colorado

Principal Staff: Dr. Leslie Fishman.

Project Title: Methodology for Projection of Occupational Trends in the Denver Standard Metropolitan Statistical Area

Objectives and Procedures: The objective of the study was to survey and evaluate the state-of-the-art of local occupational manpower projections. It reviewed and analyzed the literature and techniques of employment projections and the various theoretical approaches to occupational forecasting. It evaluated the sources and limitations of available data for making these forecasts, and assessed the needs and possible methods for improving national and local industry and occupational employment statistics. In addition, it cataloged many of the various types of national and local occupational demand forecasts currently prepared in the United States and attempted to measure their precision and adequacy for program and planning purposes.

The authors also developed several tables showing the nature of production relationships between industries in a local area and the distribution of employment in each major industry by major occupation. These tables were used in constructing a preliminary experimental model of the Denver area economy. From the model they predicted employment in 20 major occupations in 10 major industries for 1970 and 1975.

Status of Project: The final report was received in June 1966.

Highlights of Findings: The report reviews the various methods available for a projection of occupational requirements for a Standard Metropolitan Statistical Area (SMSA) and the data available to supplement these approaches, and recommends theoretically ideal methodology and data collection techniques.

Appendix I to the report provides a detailed annotated bibliography on employment projections and data available for making these projections. Appendix II develops and applies an economic model for occupational projections of 20 major occupations in 10 major industries in the Denver SMSA using econometric and matrix techniques.

Contract No.: MDTA 15-64

Contractor: Columbia University
Seminar on Technology and Social
Change
New York, New York

Principal Staff: Dr. Aaron W. Warner.

Project Title: Obsolescence of Scientific and Engineering Skills: A Pilot Study

Objectives and Procedures: Information on the problems of technical skill obsolescence was obtained from about 40 organizations, through depth interviews with engineering managers and other directly-involved executives. The data were analyzed in order to: (1) Identify the process of scientific and engineering skill obsolescence in typical occupations and industries, identify the areas which need investigation, and develop pilot techniques for assessing the size and nature of the problem; (2) outline the staffing and operational problems which skill obsolescence poses for research and engineering management; (3) appraise and evaluate the programs instituted by certain industrial firms for equipping obsolescent scientific and engineering personnel with new skills; and (4) develop concepts, information, and related techniques of investigation which will be useful for public and private agencies working on problems arising from obsolescence of scientific and engineering skills.

Status of Project: A final report is scheduled for late 1966.

Preliminary Highlights of Findings: Although a majority of the managers interviewed felt that the general problem was only of moderate seriousness, several types of situations, involving small numbers of professional research-development-design (R-D-D) personnel, were singled out as especially troublesome: (1) Motivating those R-D-D professionals (largely mature-age) whose skills have become outdated, and who have not updated themselves under the firm's continuing-education programs or in other ways; (2) determining the disposition of skill-obsolescent R-D-D personnel when reductions in the professional-technical workforce become necessary; (3) identifying, developing, and updating competent project leaders, systems engineers and other "key" practicing professionals, and motivating them to continue as practitioners in preference to moving into management positions; and (4) assessing the kind and degree of updating needed by technical managers, and providing the means and incentives necessary to bring about such updating.

To these might be added two manpower needs which cut across the more specific problem areas: (1) Devising and applying dependable performance appraisal programs for professional-technical employees; and (2) devising and conducting effective updating-education programs for all levels of professional-technical personnel.

Contract No.: MDTA 36-64

Contractor: University of Denver
Denver Research Institute
Denver, Colorado

Principal Staff: James F. Mahar, Dean C. Coddington.

Project Title: Short-Term Impacts of Automation and Technological Change on Employment in the Power Laundry Industry

Objectives and Procedures: This pilot study of 20 plants develops a methodology and framework of analysis for determining and predicting the significant effects of technological change on employment in plants of the power laundry industry (SIC 7211). The methodology may be useful for the analysis of technological change in other industries.

The objectives were: (1) Identification of significant existing innovations which had been adopted by some, but not all, of the plants in the study; (2) identification of proposed innovations whose adoption seemed relatively certain; (3) prediction of the rates of adoption of both the foregoing items; and (4) estimation of the impact of these innovations on employment in the industry.

Status of Project: The study was completed in September 1965.

Highlights of Findings: The study isolates the significant variables which determined the rate of adoption of technological innovations. For example, the question of whether to adopt the first washer-extractor in the washroom of a plant was found to be determined by the size of the laundry. Further analysis of the sample plants indicated an anticipated employment decline of less than 2 percent for the 6-year period 1964-70; that occupational skill requirements will change little during this period; that expected changes generally will result in slightly less labor effort; and that no major innovations are expected in the industry.

Contract No.: MDTA 29-64

Contractor: Harvard University
Cambridge, Massachusetts

Principal Staff: Dr. John Dunlop.

Project Title: The Changing Skill and Occupational Composition of Employment Opportunities

Objectives and Procedures: This study seeks to develop improved concepts, measures, and procedures for analyzing the distribution of occupations among the Nation's employed labor force. These tools are expected to permit more detailed and accurate estimates of changes in the relative demands for labor resulting from technological and supply-demand developments.

Based on the assumption that more accurate groupings of occupations at various skill and responsibility levels are needed to provide better estimates of changing job requirements, the project will attempt to develop such groupings through experimentation with past manpower data. The ranking of occupations will be checked using tests such as job evaluation, relative wage levels, mobility patterns, and education and training levels. The various occupational categories developed will be used to project employment levels for 1970 or 1975.

Status of Project: Completion is scheduled for late 1966.

Contract No.: MDTA 38-64

Contractor: Harvard University
Cambridge, Massachusetts

Principal Staff: Dr. John Dunlop.

Project Title: The Impact of Technological Change on the Skill and Occupational Composition of Employment Opportunities

Objectives and Procedures: The objective of this study is to develop methods for estimating the effects of technological change upon the skill requirements and the distribution of occupations in selected industries. To accomplish this, the occupational patterns of a number of new plants will be compared with the older plants which they replaced in the same industry.

Information to be secured from each plant or facility includes data on number of employees in each occupation, occupational wage schedules, areas of seniority, and patterns of such internal movements as promotions and layoffs. Occupational comparisons between the old plants and the new will concentrate on measures of the differences in skill, responsibility, and other occupational characteristics.

The impact of technological change on job content will be studied by comparing the old and the new plants. Data will be secured for approximately 20 new plants and for the older plants which they replaced. Special

emphasis will be placed on the disappearance of old occupations and the emergence of new ones.

Status of Project: Completion is scheduled for late 1966.

Contract No.: 81-42-04

Contractor: University of Houston
Houston, Texas

Principal Staff: Dr. E. E. Liebhafsky.

Project Title: An Analysis of Forces Underlying Decisions of Potential Workers To Refrain From Labor Force Participation

Objectives and Procedures: This pilot study attempted to develop a methodology to investigate the reasons why persons who would be expected to be in the labor force were not. It was hoped that the information gained from the study would: (1) Contribute to an understanding of the attitudes of workers who withdraw from or refrain from entering the labor force; (2) help determine methods for inducing such potential workers to seek jobs; and (3) provide better guides for the development of training programs and school curricula.

The study was conducted in the Houston, Tex. labor area and involved interviews with about 60 men who were neither working nor actively seeking work. The interviews were designed to identify work attitudes and their causes and to provide information concerning work experience, unemployment histories, skills, educational attainment, place of birth and subsequent areas of residence. The interviews were expected to provide the basis for a methodology (a questionnaire and/or interview techniques) for a future study of potential workers.

Respondents were selected from unemployment insurance records and from records of churches, missions, settlement houses, and welfare agencies. A few households in low income areas were also canvassed.

Status of Project: The study was completed in November 1965.

Highlights of Findings: The sources used did not provide a large enough number of men who were outside the labor force to test the hypotheses adequately. The major conclusion reached, therefore, was that the

sources for selection of respondents were inadequate for the identification of people who normally would be in the labor force but in fact are outside it.

Contract No.: MDTA 5-64

Contractor: The University of Illinois
Institute of Labor and Industrial Relations
Champaign, Illinois

Principal Staff: Dr. Walter H. Franke.

Project Title: Training and Recruitment Problems for Selected Technical Occupations in Short Supply

Objectives and Procedures: Severe occupational shortages exist in areas where there are also high levels of unemployment. Many of these shortages are in technical occupations requiring considerable training. This study is designed to provide understanding that will help achieve more rational adjustments to occupational changes.

Six key technical occupations in which there are critical shortages of workers are being studied to determine the causes of these shortages and the effectiveness of current job placement processes and institutions in removing or lessening the shortages. Studies are being undertaken in the St. Louis and Chicago metropolitan areas in the following occupations: Licensed practical nurses; medical technologists; tool and die makers; tool and die designers; engineering technicians, electronics; and engineering technicians, metal working.

Status of Project: Completion is scheduled for late 1966.

Preliminary Highlights of Findings: Findings indicate that labor shortages existed in all of the six skilled and technical occupations studied even though there was not a general shortage of labor at the time. These shortages had persisted over extended periods of time and were related in various combinations for the different occupations to such factors as insufficient training facilities, turnover of trainees and journeymen, costs of training for both trainee and company, lack of systematic recruitment and counseling efforts, unsatisfactory wages and working conditions, and the attraction of alternative employment opportunities.

Contract No.: OAM 5-63 (F)

Contractor: International Labour Organisation
Geneva, Switzerland

Principal Staff: Dr. Ralph H. Bergmann.

Project Title: International Differences in Factors Affecting Labour Mobility—Inter-industry, Occupational and Geographical: Selected Countries of Western Europe

Objectives and Procedures: The objectives of this study were to ascertain international differences in degree of interindustry, occupational, and/or geographic labor mobility, and to explain the differences by relevant economic and institutional factors.

The study examined worker mobility provisions, turnover rates, and changes in the employment structure by industry, occupations, and geographic area, with the major focus on West Germany, Italy, France, and Sweden. The influence of employer organizations, labor unions, and government on labor mobility was also investigated. Analysis was made of observed differences and the role of political and institutional factors affecting mobility.

Status of Project: The final report was received in March 1966.

Highlights of Findings: The findings indicate that most European worker-relocation programs conformed to the specific needs of each country, operational costs tended to be relatively low, and the number of workers relocated in such programs was small. Despite a growing awareness on the part of prominent government and trade union leaders of the need for an active labor policy, official measures, except in Sweden, have been of limited importance in improving geographic and intersector labor mobility.

Contract No.: OAM 5-63 (C)

Contractor: International Labour Organisation

Principal Staff: Dr. Karl H. Ebel, Sven Grabe, Dr. Jacques Monat, Angela Butler.

Project Title: European Apprenticeship (ILO CIRF Monograph; Vol. 1, No. 2)

Objectives and Procedures: The objectives of this project were to assess and compare the main trends

and institutions of apprenticeship in several European countries with a view to determining the modifications necessary to bring traditional practices into line with the changing requirements of modern industry. The study compares the background and evolution of apprenticeship in eight countries, the organization of training in centers and schools, the role of apprenticeship in preparing youth for entry into skilled work, and the administrative and financial machinery of apprenticeship programs.

Status of Project: The final report was received in January 1966.

Highlights of Findings: It was found that while basic administrative patterns of apprenticeship in Western Europe have remained traditional, the purpose of such training is evolving into a system of work-oriented education for out-of-school youth. The strongest pressures for change are considered likely to come from accelerated technical development and the current educational explosion.

Training systems must be modified to allow relatively short periods of practical experience, full-time technical course work, and training in a wide range of skills. Programs must make room for older workers displaced from farming or small businesses by economic change. Since the training schools of many firms and artisan shops are too small to be efficient, local industrial associations or bodies representative of a large number of firms must take the responsibility of planning programs.

Contract No.: OAM 5-63 (G)

Contractor: International Labour Organisation
Geneva, Switzerland

Principal Staff: N. Franklin.

Project Title: International Comparison of Procedures for Dealing with Redundancy in Selected Countries in Europe

Objectives and Procedures: This project will survey methods for handling unemployment problems in selected European countries and will attempt to explain differences in the relative efficiency of these procedures.

The study will analyze the economic characteristics of industries in which employment has been decreasing. Surveys will be made to describe measures to cope with

surplus labor, and to assess the relative importance of individual measures and the relative efficiency of national practices among countries. The similarities and differences in the extent and form of government involvement in these problems will also be analyzed.

Status of Project: Completion is scheduled for late 1966.

Contract No.: OAM 5-63 (D)

Contractor: International Labour Organisation
Geneva, Switzerland

Principal Staff: Sven Grabe.

Project Title: Training of Maintenance Workers

Objectives and Procedures: The principal objective is to determine possible sources of skilled workers in the mechanical/electrical fields to service and maintain machinery in automated and mechanized plants. The project also will furnish material for determining action required to assure appropriate training of these maintenance workers.

Status of Project: Field investigations have been conducted in several European countries and interviews and observations made in selected plants in the chemical and bakery industries. Completion is scheduled for the winter of 1966-67.

Contract No.: MDTA 1-63 (A)

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: Harry P. Cohany.

Project Title: The Operation of Severance Pay Plans and Their Implications in Labor Mobility (BLS Bulletin No. 1462)

Objectives and Procedures: This project was concerned with the operation of severance pay plans, with particular attention to their effects on the mobility of displaced persons. Mail questionnaires were sent to both company and union officials involved in approxi-

mately 500 severance pay plans covered by major collective bargaining agreements. Information was gathered on items such as amounts paid out, reasons for job terminations, kinds of employees involved, and aspects of the plans that helped workers find new jobs, learn new skills or move to new locations.

Status of Project: The final report was published in the fall of 1965.

Highlights of Findings: The direct effects of severance pay on labor mobility appeared to be neutral, that is, the practice did not significantly impede nor enhance mobility. Management representatives generally expressed the belief that workers facing the possibility of separation did not bypass employment opportunities elsewhere so as to avoid losing severance pay.

The reasons for the failure of severance pay to more fully exploit its potential for enhancing mobility included the attitudes of the affected parties (management, union, workers), the structures and administration of the plans, the amount received at separation, and the circumstances in which workers found themselves following separation. One principal finding was that most of the displaced workers had received very little guidance concerning the use of their severance pay, and did not know how to convert their assets into effective job mobility.

The study also notes that in 22 States, the receipt of severance pay negatively affects the displaced worker's employment compensation benefits.

Contract No.: MDTA 23-64

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: Harry J. Greenspan.

Project Title: Estimates of Employment Requirements by Occupation for 1970

Objectives and Procedures: The principal objectives of the project are:

1. The development of projections for occupational patterns in 1970 in approximately 125 industries. These, together with projections of employment by industry, will be used to develop estimates of employ-

ment requirements for about 100 occupations which require specialized training or extensive education.

2. The preparation of a computer-oriented system for the application of projected occupational patterns to industry employment projections.

Data from the latest *Census of Population* and other sources, together with studies of technological change and other factors likely to modify past trends, will be used to prepare detailed 1970 occupational patterns for industries. These occupational patterns will be suitable for application to industry employment estimates now being prepared in connection with the Economic Growth Project of the Bureau of Labor Statistics.

Status of Project: Completion is scheduled for late 1966.

Contract No.: MDTA 24-64

Contractor: Bureau of Labor Statistics
U.S. Department of Labor
Washington, D.C.

Principal Staff: Donald Landay.

Project Title: A Study of the Effects of the Extension of Health, Welfare, and Insurance Benefits on the Mobility of Laid-Off Workers

Objectives and Procedures: The study was intended to explore the mobility implications (in terms of impeding or facilitating job mobility) of extending health and insurance benefit coverage to laid-off workers in selected industries.

Information was developed on the mobility implications of health and insurance programs by use of: (1) Interviews in mid-1965 with labor, management, and officials affiliated with insurance programs for their experiences, data, and opinions about the mobility implications of the extension of health and insurance coverage to laid-off workers; and (2) interviews with a random sample of workers laid off in each of 15 selected companies. These latter interviews probed the use of such benefits during layoff and the ways in which the benefits affected the worker's mobility decisions.

Status of Project: This exploratory study was completed in March 1966 and an unpublished report submitted to OMPER.

Highlights of Findings: These case studies suggest that other underlying economic and job security forces that come into play during a layoff situation are far more significant than health, welfare, and insurance benefits, and that even if these forces had some effect, they are obliterated by stronger influences. Interviews with management and union officials indicated that the extension of health, welfare, and insurance benefits, in their opinion, had no significant effect on the jobseeking efforts of workers on layoff, nor was it designed to do so, and interviews with workers confirmed this conclusion.

Contract No.: MDTA 81-19-37

Contractor: University of Maryland
College Park, Maryland

Principal Staff: Dr. George A. Pownall.

Project Title: Employment Problems of Released Prisoners

Objectives and Procedures: This pilot study will analyze the employment problems of released prisoners and evaluate their experiences in the light of their pre-prison educational background and job experiences, and their vocational or work-related training in prison. The information gathered will serve as a basis for recommendations to improve vocational training programs in correctional institutions and to increase employment opportunities for released prisoners. A secondary objective is to develop suggestions for improving the reporting system through which employment and related data on parolees are collected.

Information is being obtained through interviews with parolees in the Baltimore and Philadelphia areas and from official records. Detailed information is being gathered concerning parolees' jobseeking efforts, wages, satisfaction with employment, and reasons for not seeking work if not gainfully occupied. In order that the longitudinal information will be complete, interviews are also being scheduled with parolees who return to prison.

Status of Project: Completion is scheduled for March 1967.

Contract No.: MDTA 9-63

Contractor: Michigan State University
School of Labor and Industrial Relations
East Lansing, Michigan

Principal Staff: Dr. Einar Hardin, Dr. Sigmund Nosow, Dr. Michael Borus.

Project Title: Measuring the Benefits and Costs of Retraining Programs for Unemployed Workers

Objectives and Procedures: This study seeks to answer questions about the economics of retraining programs. An attempt will be made to determine whether there are net economic advantages of retraining to the individual participants and to society as a whole.

Three sets of estimates are being developed: (1) Private benefits and costs to participating individuals; (2) social benefits and costs, covering the impacts on the national economy; and (3) budget impacts, covering changes in government tax receipts and expenditures.

Data on benefits were collected largely from trainees and control groups by means of personal interviews. The interviews covered personal characteristics and sociopsychological variables related to the economic returns on retraining expenditures. Most of the cost elements will be estimated from information to be provided by educational institutions and government agencies.

Status of Project: Completion of the study is scheduled for late 1966.

Contract No.: MDTA 17-63⁵

Contractor: University of Michigan
Ann Arbor, Michigan

Principal Staff: Dr. J. R. P. French, Jr., Dr. Gerald Gurin, Dr. David Bradford.

Project Title: Attitude Survey of Manpower Development and Training Act Trainees

⁵ This project is being jointly sponsored by the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, and the Office of Education, U.S. Department of Health, Education, and Welfare.

Objectives and Procedures: This study seeks to evaluate the attitudes and motivation of MDTA trainees. Information is being sought from 6,000 trainees, 2,000 by means of personal interviews and 4,000 through written questionnaires administered by instructors of MDTA courses. Trainees are being questioned on their attitudes toward the MDTA program, their satisfaction with teaching methods, their perception of the relevance of instruction to work experience, their reactions to past unemployment, and their rating of the skills for which they are being trained compared with previous skill levels.

Analyses will be made to compare changes in attitudes and motivation over time—at enrollment, on completion of the program (or on dropping out), and 6 months after training is completed. Post-program job histories, including relevance of training to subsequent employment and to effectiveness of job performance, will be related to attitudinal and motivational changes, to certain demographic characteristics of the trainees, to their mobility history, and to previous labor force experience.

Ratings of trainees' performance in posttraining jobs will be sought from the supervisors of about 1,000 of the trainees.

Personal interviews will be used to validate data obtained from the written questionnaires and to explore certain variables in greater depth.

Status of Project: Completion is scheduled for the end of 1966.

Preliminary Highlights of Findings: Some preliminary findings are available from the pretraining questionnaire. An analysis of the responses to the questionnaire indicates that the trainees who dropped out of the program to take jobs were very similar to the group of trainees who completed the program, except that the former group felt under greater economic pressure at the time they entered the program. They were less certain that the training allowances would be adequate, they felt that they would have to work to supplement payments, they were more often married, and they more often had very young children. They also had less savings and more debts. Their greater economic concern, therefore, was a realistic reflection of their more precarious economic situation.

Contract No.: MDTA 7-64

Contractor: University of Michigan—Wayne State University
Institute of Labor and Industrial Relations
Detroit, Michigan

Principal Staff: Dr. Louis A. Ferman.

Project Title: The Adjustment by Employers, Unions, and Workers to the Employment of Negro Workers in New Jobs

Objectives and Procedures: This project is concerned with the problems that arise when an equal employment program is applied in a business enterprise. Detailed information has been elicited on the practices, procedures, and experiences of business concerns, unions, and workers in developing and applying an equal employment program enabling Negro workers to assume jobs hitherto unavailable to them. Information has been developed through case studies involving personal interviews with executives and local plant managers of approximately 40 business firms with white and Negro employees. Most of the firms had union representation. The equal employment policies, programs, and procedures of the firms have been evaluated and, where possible, patterns of experience prevalent among the companies have been identified.

Status of Project: Completion is scheduled for late 1966.

Preliminary Highlights of Findings: Study findings indicate that if Negro workers are to be successfully integrated into the work force: (1) Top level management must be genuinely and totally committed; (2) management must become positively involved in personal contact with the Negro community; (3) power to force action should be lodged in a competent and aggressive senior executive; and (4) the equal employment program must be flexible and responsive to changing needs and therefore subject to continuous review.

The findings of this study will include an analysis of both successful and unsuccessful procedures and prac-

tices which should furnish valuable guidelines for the development of programs of nondiscrimination in employment.

Contract No.: 81-22-30

Contractor: University of Minnesota
Educational Research and Development
Council of the Twin Cities Metropolitan Area
College of Education
Minneapolis, Minnesota

Principal Staff: Dr. Howard E. Bergstrom.

Project Title: Job Performance of Young Workers in Relation to School Background

Objectives and Procedures: The main objective of this project is to develop a method for predicting job success by relating a worker's high school background to the most desirable qualifications for a worker in his particular occupation. If this method of measuring a worker's employability proves feasible, it will be useful in defining requirements for entry-level jobs and for strengthening high school programs.

A sample of 1963 male high school graduates was interviewed regarding their employment experiences since graduation. The sample includes graduates from a suburban comprehensive high school, an urban comprehensive high school, and an urban vocational high school. Data on individual educational backgrounds have been obtained from school records, and employers and immediate supervisors have been interviewed for employment information. Conclusions will be drawn from this information on such problems as whether school achievement leads to "better" jobs, whether high school graduates get the types of jobs for which they have been trained, and the extent to which the type of high school program the worker has pursued—vocational, vocationally-oriented, or general—influences employability.

Status of Project: A draft of the final report was received in June 1966. Completion is scheduled for the winter of 1966.

Preliminary Highlights of Findings: Preliminary findings indicate that communication skills and personal adequacy were more significant in terms of job success among the graduates included in the study

than were specific job-related skills. Young men from all three kinds of schools were successful in obtaining jobs related to their training. However, since a greater proportion of vocational school graduates had received training, more of them obtained related jobs. Performance in school as measured by grades was not particularly relevant to success on the job, but poor school attendance was associated with poor job performance.

Contract No.: MDTA 81-22-01

Contractor: University of Minnesota
Minneapolis, Minnesota

Principal Staff: Dr. Rene Dawis.

Project Title: Work Attitudes of Unemployed Youth

Objectives and Procedures: This study is intended to determine the relationship of the attitudes, needs, expectations, beliefs, and perceptions of unemployed youth to desirable and undesirable work experience. The socioeconomic characteristics associated with these subjective attitudes will also be explored. The subjective attitudes and the job experiences of the sample groups will be analyzed to determine the actual extent and importance of these attitudes in determining success or lack of success in employment.

The study will focus on a comparison of three samples of 100 individuals each drawn from Minneapolis public high schools. The samples will consist of recent high school graduates, high school students identified by their school counselors as potential dropouts, and persons who actually drop out. The young people in each sample will be followed up for a year after the first contact, and the work experience of each will be studied, including such factors as job-finding time if employed, pay rate, number of jobs held, time employed, and job satisfaction.

The major factors believed to influence the employment experience of each youth will be evaluated through tests, questionnaires, and interviews. These factors are level of education; attitudes, needs, expectations, beliefs, and perceptions; job seeking behavior; work history prior to data collection period; aptitudes; and demographic variables, such as age, race, parental occupation, and parental education.

Status of Project: Completion is scheduled for July 1967.

Contract No.: 81-24-25

Contractor: University of Missouri
College of Education
Columbia, Missouri

Principal Staff: Dr. H. H. London.

Project Title: A Followup Study of MDTA Trainees in the Cities of St. Louis, Kansas City, and Joplin, Missouri

Objectives and Procedures: The purpose of this study is to evaluate the effectiveness of MDTA training for approximately 500 people who completed training sessions in Missouri during 1965. Their original placements are being checked and they and their employers interviewed at periods of 6, 12, and 18 months later. The project will test the approach for compiling data needed to analyze and evaluate the effectiveness of the training program. Since this study covers an 18-month posttraining period, it will not only serve as a validation for the present statistical reporting system designed to followup trainees 6 months and 12 months after completion of the course, but will also furnish data for an additional 6 months on the individual's posttraining activities.

Status of Project: Completion is scheduled for late 1967.

Contract No.: 81-24-16

Contractor: University of Missouri
Columbia, Missouri

Principal Staff: Dr. John F. McGowan.

Project Title: Conference on Government-University Relations in the Professional Preparation and Employment of Counselors

Objectives and Procedures: The problem of achieving an adequate supply of professional and related technical personnel in the field of counseling was studied in a conference in Washington, D.C. held June 2-3, 1965. The project resulted in a set of guidelines which contribute to a better understanding and more effective relations between the Federal Government and universities in dealing with employment problems in

counseling and related services. A series of studies and invitational papers was prepared for consideration by the conference participants.

Status of Project: The final report was received in the fall of 1965.

Highlights of Findings: The report includes the conference recommendations, a number of invited papers and work-study papers on particular aspects of the conference topic, and additional background materials.

Contract No.: MDTA 20-63

Contractor: National Bureau of Economic Research
New York, New York

Principal Staff: Dr. Richard A. Easterlin.

Project Title: Labor Force Trends and Projections in the United States

Objectives and Procedures: The purpose of this project was to review the "state of knowledge" of projections of the American labor force.

The study covered three major areas: (1) A description and appraisal of the "long swings" in labor force growth since 1870; (2) a more detailed analysis of the impact of developments shaping labor force growth from 1940-60, with a view to establishing the specific age-sex groups which were particularly affected by population and occupational changes; and (3) a consideration of the implications of labor force growth from 1960-75 to determine the projected situation of various age-sex groups.

Status of Project: The final report has been submitted to the Department of Labor and is now under consideration for publication by the National Bureau of Economic Research.

Highlights of Findings: Long swings of around 15 to 25 years duration appear to have occurred in the growth of the U.S. population, labor force, and households from at least the first half of the 19th century down to the present. The rationale of the swings in demographic variables is tentatively linked to cycles in economic conditions. At the same time, demographic events have had important feedback effects on economic conditions through variations in the rate of household formation. It is concluded, however, that

should an upswing in aggregate demand occur over the next decade, it will occur under labor supply conditions different from past cycles. The particular configurations in prospect seem less certain of producing the roughly synchronous movement of population, labor force, households, and multiplier effects that characterized prior swings.

The study concludes with a consideration of the roles of fertility and labor force participation rates in long-range labor force and economic trends.

Contract No.: MDTA 31-64

Contractor: National Bureau of Economic Research
New York, New York

Principal Staff: Dr. Geoffrey H. Moore.

Project Title: Research Conference on the Measurement and Interpretation of Job Vacancies

Objectives and Procedures: The National Bureau of Economic Research conducted a conference in April 1965 designed to stimulate research on job vacancies and on the problems of regularly compiling job vacancy statistics. The agenda included papers and/or discussion in the following areas: (1) Needs for and uses of data for measuring the current demand for labor; (2) conceptual problems of job vacancy measurement; (3) various approaches to measuring the current demand for labor; (4) empirical studies of job vacancies in the United States; and (5) empirical studies of job vacancies in other countries.

Status of Project: The proceedings of the conference, entitled *Measurement and Interpretation of Job Vacancies*, were published in the spring of 1966.

Contract No.: MDTA 34-64

Contractor: National Education Association
Washington, D.C.

Principal Staff: Dr. Virgil M. Rogers.

Project Title: Pilot Program to Assist School Districts to Meet the Needs of Technological Change

Objectives and Procedures: This project is intended to help schools reorient their vocational education programs, and to assist them in identifying implicit opportunities for shifting to broader and more general concepts of vocational education. The study will seek to determine means of adapting educational systems to current and future technological requirements.

Information has been collected over the past 2 years from administrative staffs, school boards, townsmen, club groups, students, and PTA's in two very different school districts—Quincy, Mass. and Parkersburg, W. Va. The data will be used in determining the newer vocational and manpower demands on the school system and in utilizing recent Federal legislation designed to provide assistance in this broad area.

Status of Project: Progress on the new programs has been reviewed, the necessary data have been collected, and completion is scheduled for late 1966.

Contract No.: MDTA 22-64 *

Contractor: National Opinion Research Center
Chicago, Illinois

Principal Staff: Dr. Peter Rossi.

Project Title: Negro College Graduates' Attitudes

Objectives and Procedures: The portion of this study which is of particular interest to the Department of Labor (and which is sponsored by the Department *) will attempt to determine the employment aspirations, career decisions, and plans for graduate training of a sample of Negroes of the 1964 college graduating class. These plans will be evaluated in the light of the graduates' attitudes toward their school, the social situation on campus, and the graduates' concept of employment prospects. The study involves the use of a questionnaire which has been sent to a stratified sample of Negro students attending both predominantly Negro and white universities.

Status of Project: Completion is scheduled for late 1966. At midyear, questionnaires had been returned, data tabulated, and analysis and preparation of the report was underway.

* This project is being co-sponsored by the U.S. Departments of Labor and Health, Education, and Welfare (National Institutes of Health), and the National Science Foundation.

Contract No.: 81-08-20

Contractor: National Planning Association
Washington, D.C.

Principal Staff: Dr. Leonard Lecht.

Project Title: Manpower Needs for National Objectives in the 1970's

Objectives and Procedures: This project is based on an earlier phase of the National Planning Association's Goals Project which estimated the private and public costs of pursuing national objectives in the 1970's.⁷ The primary objective of the present study is to develop projections of manpower requirements by occupation for 1975 for the achievement of national objectives in education, health, housing, space, plant and equipment, and other areas. Manpower projections are being prepared for major occupational groups and for the individual occupations within each group for some 30 economic sectors.

While many significant projections of manpower needs already have been made for the next decade, a distinctive element in the present work is that it will offer a framework for relating occupational requirements to national objectives from which overlapping implications relative to the gross national product have been removed.

Status of Project: Completion of the project is scheduled for late 1966. A preliminary report has been submitted, and the final report is being prepared.

Preliminary Highlights of Findings: Results of the study indicate that simultaneous achievement of the proposed national goals in 1975 would require an employed civilian labor force of more than 100 million, over 10 million above the expected number at full employment. This means that while our manpower resources will be adequate for considerable progress in the next decade, they will not likely be sufficient to achieve all the objectives simultaneously. Consequently, choices will have to be based on an assessment of resources, costs, and benefits.

Vigorous pursuit of these goals can be expected to occupy fully the Nation's projected labor force, even a labor force whose efficiency is above the average for the postwar period. Substantial progress toward these

⁷ *The Dollar Cost of Our National Goals*, Leonard A. Lecht, (Washington, D.C.; National Planning Association, May 1965), Center for Priority Analysis Research Report 1.

objectives would create more job opportunities for society's unutilized and underutilized human resources.

The actual pattern of the kinds of jobs which our economy will require in the next decade will be significantly influenced by the Nation's choice of priorities. For example, emphasis on such objectives as health and education would primarily increase the demand for professional workers, while goals such as urban development would primarily increase the demand for blue-collar workers.

Contract No.: 81-31-19

Contractor: New York University
New York, New York

Principal Staff: Dr. Bruno Stein.

Project Title: Local Manpower Data Programs

Objectives and Procedures: This study concerned the needs of State and local areas for manpower data in policy and program planning. Its objective was to facilitate the development and use of local manpower data by providing perspective on the adequacy of different kinds of data now prepared and published by various State and local areas. It considered the nature and uses of various types of data, and the possible sources and techniques which could be used in gathering more accurate data.

A wide variety of State and local publications which present manpower data were analyzed. Sources and techniques used to develop the data, the limitations of the data, and the intended uses of results were examined.

Status of Project: The final report was received in August 1966.

Highlights of Findings: Local studies suffer from lack of reliable data and rigorous methodology. The existing confusion regarding the goals of manpower policy is reflected in conceptual limitations, such as narrow definitions of "unemployed."

Programs which result in better methods of measuring manpower demand and supply will be beneficial. Those of most promise presently are job vacancy studies and quinquennial censuses of population. Continuous series, as opposed to single studies, are needed to provide data on changing demand and supply which are necessary for meaningful planning.

Contract No.: 81-32-11

Contractor: North Carolina State University at
Raleigh.
Raleigh, North Carolina

Principal Staff: Adger B. Carroll, Dr. Loren A. Ihnen.

Project Title: Costs and Returns of Technical Education: A Pilot Study

Objectives and Procedures: This pilot project tests the feasibility of a new method of measuring the costs and returns of investment in technical education. As technological innovations are adopted, education becomes more necessary, and its evaluation becomes more complex. The method tested in this study develops estimates of costs and returns through the control and measurement of a greater number of related variables than have been treated in previous published studies of this nature.

The estimates are based on data acquired through personal interview from three sources: (1) The educational expenditures and monthly income histories of a sample of North Carolina technical school graduates; (2) the monthly income histories of a similar sized sample of North Carolina high school graduates; and (3) records maintained by school officials for estimating private cash outlays, including earnings foregone while in school, and public costs.

Status of Project: A final report was submitted in mid-1966.

Highlights of Findings: Both social and private rates of return on investments in technical education are found to be high relative to rates estimated for other investments including college education, indicating relative inefficiency in the allocation of society's resources. Although the results themselves are limited since the study was based only on a small group of persons in the State of North Carolina, the feasibility of the method has been demonstrated.

Contract No.: MDTA 25-64

Contractor: University of North Carolina
Department of Economics
Chapel Hill, North Carolina

Principal Staff: Dr. David Brown.

Project Titles: Placement Services for College Teachers (Vol. 1) and Academic Labor Markets (Vol. 2)

Objectives and Procedures: These studies provide information on the operation of the academic job market based on survey data obtained from some 7,500 college professors who were newly hired at the start of the 1964-65 academic year. The respondents made up a carefully drawn sample representing virtually all regions, disciplines, levels of experience and salary, academic ranks, ages, and all types of 4-year college institutions as well as some 2-year institutions.

Status of Project: The findings were reported in two separate volumes, received in November 1965 and February 1966.

Highlights of Findings: Tradition and professional ethics greatly restrict the use of customary formal methods of job finding in the academic market. The great majority of teachers find jobs through informal channels, principally with the aid of friends and former professors. During recent years, however, the use of formal methods has increased. One of the important new mechanisms for improving the operation of the academic job market has been the development of extensive and effective convention placement services with the aid of the U. S. Employment Service of the Department of Labor.

The author's recommendations for improving job market operations include: (1) Expanded placement services to professional association members; (2) better methods of liaison between graduate school departments and university placement offices; (3) establishment of an academic register and "Journal of Academic Vacancies;" and (4) wider publication of information about salary trends and other factors affecting college training opportunities.

Contract No.: MDTA 26-64

Contractor: University of North Carolina
Department of Hospital Administration,
School of Medicine
Chapel Hill, North Carolina

Principal Staff: Dr. Robert R. Cadmus.

Project Title: A Manpower Study of Clinical Laboratory Personnel, Including Medical Technicians

Objectives and Procedures: This pilot project is studying jobs of a random sample of individuals performing laboratory tests in hospitals in North Carolina. The jobs range from that of laboratory assistant and medical technologist to clinical pathologist. Information has already been obtained by interview on a variety of background factors including education and training. Relationships among laboratory activities, skill in laboratory procedures, and individual backgrounds are being examined in an attempt to sort out the various levels of skill required in the field of medical technology. Skill levels required for various clinical laboratory tasks will be related to the appropriate educational requirements.

Status of Project: Completion is scheduled for late 1966.

Contract No.: 81-20-34

Contractor: Northeastern University
Bureau of Business and Economic Research
Boston, Massachusetts

Principal Staff: Dr. Morris A. Horowitz, Dr. Irwin L. Hernstadt.

Project Title: Evaluation of the Training of Tool and Die Makers

Objectives and Procedures: The objective of this project is to define and evaluate the various avenues of skill acquisition for the occupation of tool and die maker. A survey will be conducted to determine the various methods of preparing for these occupations, and to rank these methods according to the skill levels of the workers they produce. The survey will be limited to 400 tool and die makers and their supervisors in the Boston area. Workers will supply information on their schooling and employment histories. They will then be ranked by their supervisors according to their performance of the significant work requirements of the occupation. If this system of evaluating workers' backgrounds of job preparation in terms of their level of on-the-job performance proves reliable, it can be used to determine which types of education and training should be developed or expanded.

Status of Project: Completion is scheduled for mid-1967.

Contract No.: MDTA 21-64

Contractor: Northeastern University
Bureau of Business and Economic Research
Boston, Massachusetts

Principal Staff: Dr. Dean S. Ammer, Dr. Morris A. Horowitz, Dr. Ernest DeCicco.

Project Title: Mechanization and Manpower in Gray-Iron Foundries

Objectives and Procedures: This study was conducted in order to understand better the reasons underlying managerial decisions to automate. It was based on an intensive study of seven foundries of varying sizes and types plus observations on eight other foundries which were visited. The gray-iron foundry industry was selected because it was particularly suited for a comparative case study approach since component firms can be found at almost every conceivable level of technology.

The basic objectives of the study were to: (1) Compare original decisions to automate with results actually achieved; (2) determine what intangible benefits (or losses) companies experienced as a result of automation decisions; (3) evaluate effects of particular decisions on job mix, occupational structure, and wage rates; and (4) estimate whether automation brings increasing or perhaps diminishing returns.

Status of Project: The project was completed in October 1965.

Highlights of Findings: Findings indicate that in the larger foundries management decisions to automate are primarily for expansion purposes, and to a great extent capital investment decisions are affected by business expectations. The rate of technological change in the industry is more "sluggish" now than during the 1940-50 period when most of today's "new" developments actually came into being. However, application of the technology has increased in the last 2 years. The industry is not expected to be an important source of new jobs nor is it expected to have any significant need for new job skills.

Contract No.: MDTA 16-64

Contractor: Northern Michigan University
Marquette, Michigan

Principal Staff: Dr. Kenneth L. Parkhurst.

Project Title: Manpower Problems and Economic Opportunities in an Adjusting Regional Economy: The Upper Peninsula of Michigan

Objectives and Procedures: The purpose of this project was to conduct a manpower analysis of a regional economy, Michigan's Upper Peninsula, as a first step toward the formulation of a comprehensive regional manpower program. The specific objectives of the study were to: (1) Evaluate manpower problems in the region; (2) identify present and future manpower requirements by industry; (3) identify the present and future regional labor force; and (4) demonstrate the role that a regionally based institution can play in analyzing and implementing a regional manpower development program.

The project involved the completion of a structural analysis of the labor force and industry of Michigan's Upper Peninsula to determine the characteristics of the region's manpower problems, and the development of a regional model to forecast regional manpower demands by industry for 1970 and 1975. The model developed is a general one which could be useful for the investigation of other regional economies with manpower problems similar to those of the area studied.

Status of Project: The final report was submitted in the winter of 1965.

Highlights of Findings: Outmigration during the 1950's effected a decline both in the civilian labor force and in the population of working age (18-64 years), but it was of insufficient volume to bring about reasonably full employment. This factor, together with a decrease in the labor force participation rate which by 1960 was 11 percentage points below the nationwide level, leads to the conclusion that forces facilitating mobility were insufficient and that Government retraining and relocation programs could be beneficial.

A major additional aspect of the study was the development of an econometric model to forecast the labor requirements of the Upper Peninsula's economy. This model could be applicable to other regional economies with similar manpower problems.

Contract No.: 81-22-35

Contractor: North Star Research and Development Institute
Minneapolis, Minnesota

Principal Staff: Dr. Guy H. Miles.

Project Title: Effects of Vocational Training and Other Factors on Employment Experience

Objectives and Procedures: The overall objective is to explore the degree to which vocational training contributes to employability, taking into account the interrelationships between training and a broad range of other factors relevant to employability.

A feasibility study was conducted in Hennepin County, Minn. to test the extent to which a household survey can produce the desired data, the extent to which these data are reliable, and the extent to which the individuals responding are typical of the general population. Data were obtained on the individual's employment record for the past 3 years, his vocational training, and several other factors such as formal education, health record, military status, and the socioeconomic level of the childhood home.

Status of Project: The results of the feasibility study are under review to determine whether to proceed with a proposed 2-year program covering urban, mining, and agricultural areas in Minnesota.

Contract Nos.: 81-34-28 and 81-08-38

Contractors: The Ohio State University Research Foundation, Columbus, Ohio

Bureau of the Census, U.S. Department of Commerce, Washington, D.C.

Principal Staff: Dr. Herbert S. Parnes, The Ohio State University; and Demographic Surveys Division, Bureau of the Census.

Project Title: Longitudinal Study of Labor Force Behavior

Objectives and Procedures: The objective of the study is to identify and explore the interrelations among factors influencing the work behavior and experience of young men 14 to 24 years old, men 45 to 59, and women 30 to 44 (at the beginning of the study). Available data on employment and unemployment by demographic, occupational, and industrial characteristics permit the identification of some of the important factors associated with the job difficulties of these (and other) groups (e.g., inadequate education or discriminatory hiring practices). What is not known,

however, is the interaction among economic, sociological, and psychological variables that permits some members of a given age-education-occupation group to have satisfactory work experience while others do not. In addition, the proposed study will generate the most comprehensive body of data on labor mobility that has ever been produced, albeit for restricted segments of the labor force.

This study contemplates six consecutive interviews a year apart with each of the three population samples. The Bureau of the Census is responsible for drawing the samples and for conducting the interviews. The contract with Ohio State provides for the preparation of the interview schedules, planning the required tabulations of the data (the actual editing, coding, and tabulation of the data to be accomplished by the Bureau of the Census), and analyzing the results of and preparing a report on the initial survey for each age-sex group. If mutually agreeable, the contract will be extended to cover the follow-up surveys and the preparation of a final comprehensive report covering the six interviews for each group.

The interview schedules for the initial survey will be considerably longer than for the subsequent ones. They will include extensive work histories of the respondents as well as questions that will permit at least simple psychometric and sociometric profiles of the respondents to be developed. Both initial and subsequent interviews will involve probing questions designed to uncover motivational factors in labor force behavior.

Status of Project: Preliminary results of the survey of older men are scheduled for the end of 1966. First reports on younger men and on women will probably be available in the summer of 1967 and at the end of 1967, respectively.

Contract No.: MDTA 14-64

Contractor: The City of Philadelphia
Manpower Utilization Commission
Philadelphia, Pennsylvania

Principal Staff: Dr. Aaron J. Spector, Dr. Saul Leshner, Ralph Ormsby.

Project Title: A Study of the Need for Work Adjustment and Social Work Assistance for the Long-Term Unemployed

Objectives and Procedures: Emotional, psychological, and motivational factors are believed to incapacitate the very long-term unemployed individual so that he can neither participate in the world of work nor benefit from vocational training or retraining. It is also believed that these incapacities can be overcome through specific pre-vocational experience consisting of work adjustment or social work assistance or a combination of both.

The project is attempting to determine whether specific programs of assistance offered the long-term unemployed will significantly improve their employability and trainability. The costs and benefits of this program are also being evaluated.

The original research method involved the selection of a sample of long-term unemployed persons in the city of Philadelphia and the determination of each individual's need for work adjustment counseling, social work assistance, or a combination of both. Groups referred to each of the above programs are divided equally, with one-half provided with the required services and the other half serving as a control group. A comparison of the posttraining employment experiences of those receiving the special services with those not receiving them should indicate the utility of such special pre-vocational programs.

Status of Project: Completion is scheduled for mid-1967.

Preliminary Highlights of Findings: Early progress reports indicate that persons identified as needing the family service invariably also need work adjustment counseling. Therefore the research sample for social work assistance only, was eliminated from the study.

The services portion of the research has been completed and the subjects referred to vocational training. The study of the subjects' ability to benefit from vocational training and their subsequent success in employment is now underway.

Contract No.: 81-13-33

Contractor: Purdue Research Foundation
Lafayette, Indiana

Principal Staff: Dr. Alfred S. Drew.

Project Title: A Study of the Need for Educational and Training Adjustments in the Apprenticeship Programs for Selected Craft Occupations

Objectives and Procedures: This study will develop models of apprenticeship programs in selected craft occupations. Special attention will be given to incorporating built-in procedures for adapting to technological change.

Questionnaires and other survey instruments will be developed and utilized by an interdisciplinary research staff from the fields of industrial education, engineering, sociology, psychology, and economics, in order to secure data on the format, content, and effectiveness of current apprenticeship training programs. Information will be obtained from apprentices in training, their instructors, journeymen craftsmen, teacher-educators, and labor and management representatives. Areas to be examined include basic subject matter such as mathematics and trade technology, the background of qualified instructors, on-the-job training, and provisions for developing desirable attitudes.

Status of Project: Completion is scheduled for October 1967.

Contract No.: 81-32-31

Contractor: Research Triangle Institute
Durham, North Carolina

Principal Staff: Dr. A. L. Finkner.

Project Title: Employment Problems of Young Men Who Do Not Meet Mental Requirements of the Selective Service System

Objectives and Procedures: The development of techniques for diagnosis of the employment problems of young men who fail Selective Service mental testing is the major objective of this study. In addition, an evaluation of current programs which affect the rejectees will be undertaken, particularly with respect to the interaction among Federal, State, and local levels of administration.

Techniques will be developed to measure the ability of the mental rejectee to adjust to work requirements. Methods for measuring the potential of the rejectees to obtain employment through remedial action programs will also be developed.

These objectives will be accomplished through data collection and measurement techniques which will be tested and evaluated in a pilot investigation of 200 mental rejectees. The samples for this investigation will be drawn from North Carolina, to reflect an urban-

rural mix, and from Baltimore to represent a large industrial metropolitan area.

The data collected will be analyzed not only to obtain preliminary information on the rejectees, but also to obtain the estimates and information to be used in planning a full-scale national survey.

Status of Project: Completion is scheduled for late 1966.

Contract No.: MDTA 39-64

Contractor: Rutgers—The State University
New Brunswick, New Jersey

Principal Staff: Dr. Jack Chernick.

Project Title: The Distinguishing Characteristics of Workers Eligible for Training Programs and Their Success or Failure in the Selection and Training Process.

Objectives and Procedures: In order to develop specialized training techniques for stimulating the interest and abilities of people previously unsuccessful at being selected or trained, this project seeks to identify the characteristics of individuals eligible to receive MDTA training, and to determine to what extent these characteristics cause them to fall into one of these categories: (1) Unemployed persons who have not manifested any interest in training; and (2) persons who have indicated an interest in training and who either enter training and successfully complete the course, enter training and terminate before completion, or do not enter training at all.

Pertinent data were collected for 2,600 persons selected at random from existing records of three Newark, New Jersey Employment Security offices. These data were supplemented by in-depth interviews with about 500 persons.

Status of Project: The final report is scheduled for the winter of 1966.

Preliminary Highlights of Findings: The study indicated that in the Newark labor area, where training under MDTA was available to only a small fraction of the unemployed during the 15-month period studied, acceptances for training tended to be weighted toward those in prime working age groups, and with more than average education. The study was also weighted to-

wards women rather than men, and towards Negroes as opposed to whites.

Counseling and testing, the prime MDTA selection methods, clearly distinguished those accepted for training from those not accepted, but revealed few differences among those completing training and those who terminated before completion. The study also covered attitudes toward work and other motivational characteristics.

It was concluded that expansion of the training program in the Newark area appears to depend on the extent to which it can be made to serve prospective trainees who are relatively less qualified.

Contract No.: MDTA 81-04-27

Contractor: San Jose State College
San Jose, California

Principal Staff: Dr. R. P. Loomba.

Project Title: A Study of the Unemployment and Re-employment Experiences of Scientists and Engineers Laid-off by Aerospace and Electronics Firms in the San Francisco Bay Area During 1964

Objectives and Procedures: The study is concerned with the analysis of selected aspects of the unemployment and re-employment experiences of a sample of 1,200 engineers and scientists permanently laid off by the defense-oriented aerospace and electronics companies in the San Francisco Bay Area during 1964. By means of mail questionnaires, the study seeks: (1) To identify the laid-off scientists and engineers in terms of personal and social characteristics, nature and duration of education, employment history, and other factors; (2) to investigate the adequacy of other income sources during the layoff period; and (3) to analyze the job search procedures which were utilized.

Status of Project: Completion is scheduled for late 1966.

Preliminary Highlights of Findings: Tentative observations from the preliminary analysis of the data suggest that more than half the laid-off engineers and scientists subsequently found re-employment in commercial jobs without undergoing retraining.

Further, the data also suggest that:

1. While unemployment insurance was the most commonly used source of financial support for the engineers

and scientists, in general it proved inadequate since more than half the engineers and scientists who remained unemployed for 4 weeks or less had to liquidate savings and investments.

2. Direct application to companies was the most efficient method used by the engineers and scientists in obtaining re-employment.

3. Outplacement services offered by employers, although not a commonly used method, were relatively more efficient than private employment agencies, the California Department of Employment, or services of professional societies and trade and professional magazines.

4. It appears that defense employers do not give reasonable advance notice of pending layoffs to engineers and scientists. One-half of the engineers and scientists who were laid off by the defense-oriented companies received advance notice of less than 8 days.

Contract No.: 81-04-29

Contractor: Stanford Research Institute
Menlo Park, California

Principal Staff: Dr. Harry V. Kincaid.

Project Title: Impacts of Technological Changes in Warehousing.

Objectives and Procedures: This project was originally planned as a two-part study, with the second part contingent upon findings from the first phase. The entire project was to provide a body of information concerning the probable impacts of technological changes in warehousing operations on the labor force during the next decade. In addition, the feasibility of using a functional rather than industry approach in the study of technological change was also to be tested.

Phase I consisted of an exploration of available source data with the search directed towards finding data detailed enough to adequately meet the demands of the study, since warehousing as an industry cuts across most industrial classification lines except service. Several primary sources of data were explored, originating from Federal agencies, State labor and employment offices, labor unions (international, national and local), regional and local employer associations, and management and labor consultants.

Status of Project: Phase I was completed in January 1965 and the project was terminated.

Highlights of Findings: The researchers were unable to find satisfactory sources of data which allowed for the functional identification of warehousing establishments. It was also found that the introduction of automatic warehouse equipment is mainly confined to large operations where the size and type of material are uniform; cost factors prohibited the installation of automatic equipment in other circumstances. It was the researchers' conclusion that the pace at which new equipment is being utilized has had and probably will continue to have negligible effects on employment and occupations in warehousing operations. In view of these findings, phase II was not initiated.

Contract No.: MDTA 12-64

Contractor: Stanford Research Institute
Menlo Park, California

Principal Staff: Dr. Harry Kincaid, Donald Woodworth, Gertrude Peterson, Phyllis Hamilton.

Project Title: The Scope of Industrial Training in Selected Skilled and Technical Occupations

Objectives and Procedures: This study involves a mail questionnaire survey on the scope and impact of company-sponsored training efforts for skilled workers in certain growth occupations. It covers manufacturing plants in metalworking industries with 500 or more employees and includes the occupations of maintenance electrician, tool and die maker, electronic technician, maintenance mechanic, millwright, and welder. For these occupations, information has been collected on employment trends and on the methods used by employers for meeting manpower needs. Quantitative data concerning the numbers of workers trained or retrained and the general nature of the training have been obtained for persons in the occupations covered.

Status of Project: Completion is scheduled for late 1966.

Preliminary Highlights of Findings: There was great variation in recruiting and training practices both among plants and within occupations. For highly mobile occupations (those with a high growth rate and high turnover), the most common method for meeting manpower needs among the industries studied was by recruiting already qualified workers. Training new

workers or retraining other employees was the next most common method of filling the desired positions. Larger plants were more likely to have training programs than smaller plants. More persons received training in the newer, more technologically complex occupations such as electronic technician and maintenance electrician than in the more traditional occupations such as millwright and welder.

Contract No.: MDTA 18-64

Contractor: Staten Island Mental Health Society, Inc.
Staten Island, New York

Principal Staff: Dr. Wallace Mandell, Dr. Clyde Sullivan.

Project Title: Restoration of Youth Through Training

Objectives and Procedures: A training program at Rikers Island, undertaken and financed by the New York City Department of Correction, gave occupational training before release to 150 youthful offenders aged 18-21 years. The research study is concerned with the implications of such training for the future careers of youths who had been offenders.

An experimental group received training as operators of electronic data processing equipment. The training was on a full-time 6 day-a-week schedule combining job training, classroom instruction in literacy, and self-management counseling.

Placement services, counseling and guidance, and family referral services were also given the experimental group during the post-release period, and the experience of this group is being compared with that of a control group of 150 volunteers. Both the experimental group and the control group had to pass an aptitude test designed for electronic data processing jobs.

The implications of the training program for other correctional institutions will receive careful study.

Status of Project: Completion is scheduled for late 1966.

Preliminary Highlights of Findings: Findings of this project indicate that: (1) Most of the trainees were capable of absorbing the training necessary to operate data processing equipment, even though they were school dropouts; and (2) in the large number of local

jails in this country where it is typical for youthful inmates to serve relatively short prison terms, meaningful vocational training can be given.

Contract No.: MDTA 41-64

Contractor: Temple University
Philadelphia, Pennsylvania

Principal Staff: Dr. Louis P. Harms.

Project Title: Projective Models of Employment by Industry and by Occupation for Small Areas: A Case Study

Objectives and Procedures: This project developed models for projecting employment by industry and occupation for local areas. The objective of such projections was to forecast the job openings of industries and occupations within the areas so that appropriate action might be taken to implement local manpower policies. Such forecasts could also be used as planning goals for industrial development and the development of manpower resources.

Projections of basic employment trends by industry and occupation were developed from a combination of analysis of historical data and judgmental factors for the years 1965, 1970, 1975, and 1980.

Three models for making long-range industry and occupational employment projections were developed based on *Census of Population* data for 1950 and 1960, annual industry data from the Bureau of Employment Security, and information from other sources. The data were interpolated between the census dates and extrapolated to 1963. The models were then applied to Silver Bow County, Mont.

Status of Project: The final report was received in April 1966.

Highlights of Findings: The basic historical-trend data model (and its modifications) was used to show the national and State influence on local projections by computing the relative importance of key industries' local employment compared with that in the Nation or State. The final judgmental model incorporated the influence of output or demand factors, costs, productivity, and other relevant factors. In addition, a method of making short-range industry projections based on export coefficients and an employment multiplier was also demonstrated. Methods for estimating

labor supply were also demonstrated and future net job opportunities or losses were estimated.

Contract No.: 81-37-03

Contractor: Temple University
Philadelphia, Pennsylvania

Principal Staff: Herman Niebuhr, Jr.

Project Title: Dialect Remediation Training in Philadelphia, Pennsylvania

Objectives and Procedures: This research complements an experimental and demonstration program conducted by Temple University. The demonstration project trained 160 young Negro women with language problems related to dialect, in occupations requiring a considerable degree of communication skill. Because of their dialects the employability of the students in these occupations was severely limited.

Two groups of 80 persons each were matched on the basis of level of maldialect, age, and intelligence. Each group attended remedial English classes which were identical except that the experimental group was subjected to a combination of sequential programmed remediation lessons and a technique of paired students serving both as teachers and pupils.

The research project will test the efficiency of the special techniques in aiding Negroes with dialect problems in obtaining employment which requires a considerable amount of communication skill. It also will explore sociopsychological factors as they relate to speech remediation and motivation for employment.

Three types of data were collected during the training phase: Phonetic distortion levels and grammatical achievement before and after remediation training; levels of performance for individuals and for paired students for each phonetic program; and levels of aspiration, motivation, and ethnic identification, before and after remediation training.

The followup phase will consist of the collection and evaluation of data on types of jobs, degree of responsibility, accuracy of performance, employers' rating of communication facility, fellow employees' evaluation of ability to communicate, employers' rating of general demeanor, and employees' rating of job satisfaction and future plans.

Status of Project: Completion is scheduled for late 1966.

Contract No.: MDTA 6-64

Contractor: The W. E. Upjohn Institute for Employment Research
Washington, D.C.

Principal Staff: Dr. Harold L. Sheppard, Dr. A. Harvey Belitsky.

Project Title: The Job Hunt: Job-Seeking Behavior of Unemployed Workers in a Local Economy

Objectives and Procedures: This study is concerned with the social, psychological, and economic factors that affect the jobseeking behavior of blue-collar and selected groups of white-collar workers. Personal interviews were conducted with approximately 550 unemployed workers as well as selected employers, union representatives, and local community leaders in Erie, Pa.

Status of Project: The report was completed in the fall of 1966. A book entitled "The Job Hunt" based on the study findings is currently in preparation, and publication by Johns Hopkins University Press is expected in late 1966.

Highlights of Findings: This project pioneers in the effort to relate jobseeking behavior to motivational and attitudinal factors such as job-interview anxiety and the need for achievement. For example, laid-off workers who expressed willingness and determination to reach a goal and who held values which emphasized success were much more likely to have conducted a thorough and successful job hunt than those who did not possess these attributes.

The degree of anxiety a jobseeker feels in a job-interview situation was also found to be associated with his success in finding a job as well as his thoroughness in looking for a job. Most workers who scored high in motivation and low in interview anxiety got new jobs through direct application to companies, very few through friends and relatives and other sources.

Laid-off workers who started their job search immediately and contacted many companies rather than limiting their applications to those firms that they had heard were hiring, were most successful in finding jobs.

This study updates and reaffirms many of the results of earlier studies in other locations. For instance, among workers not recalled to their jobs, twice the proportion of older than younger workers was still unemployed at the time of the study.

Contract No.: MDTA 35-64

Contractor: U.S. Industries, Inc.
Silver Spring, Maryland

Principal Staff: Dr. Richard E. Walther.

Project Title: A Pilot Study of the Use of Area of Interest Self-Instructional Reading Courses Among Young Persons Considered To Be Neither Self-Motivated Nor Self-Supporting

Objectives and Procedures: The object of this research was to test the feasibility of utilizing self-instructional devices to improve the reading skills of young men neither in schools nor in the labor force, as a means of increasing their interest in vocational training and employment.

The project was carried out in three phases: (1) A field study designed to test assumptions concerning areas of vocational interest, reading ability, and motivation; (2) the design and preparation of the programs and the equipment; and (3) an evaluation of the programs and instructional systems. Exploratory phases of the project were conducted in cooperation with Action for Boston Community Development, Inc. Later phases were carried out in cooperation with the Cardozo Experimental Project, Washington, D.C., and the Maryland Correctional Institution, Hagerstown, Md. In all, 114 young men participated in the various phases of the study.

Three reading programs were developed: (1) A set of "rules of the road" for automobile drivers; (2) a description of the work of the plumber; and (3) a description of the work of the carpenter. Three different self-instructional techniques were employed in testing simultaneously the efficacy of the different reading programs and different types of self-instructional devices.

Status of Project: The final report was received in June 1966.

Highlights of Findings: Significant learning gains in both vocabulary and comprehension were reported in all programs. Differences in study time and efficiency were observed among the automated instructional systems, some of them statistically significant.

Observations and case studies are included in the final report for the guidance of instructors and programmers in developing teaching materials and assessing the use of different kinds of programmed training devices.

Contract No.: MDTA 14-63

Contractor: University of Wisconsin
Industrial Relations Research Center
Madison, Wisconsin

Principal Staff: Dr. James Stern, Dr. David Johnson.

Project Title: Training Implications of Job Shifts from Blue-Collar to White-Collar Employment

Objectives and Procedures: The researchers are developing information on the extent and characteristics of shifts from blue-collar to selected white-collar occupations. A sample of employers was canvassed to determine the number and kinds of shifts made, and about 450 workers in the Milwaukee area who had made such shifts during the previous 5 years were interviewed. Analyses in the final report are expected to cover patterns of job shifts, skills which are transferable, training or skill acquisition processes used by successful shifters, and correlations of such shifts with personal, attitudinal, and behavioral characteristics.

Status of Project: Completion is scheduled for late 1966.

Preliminary Highlights of Findings: 1. Over two-thirds of the shifts to white-collar work were made within the same firm.

2. The most frequently mentioned type of white-collar job to which workers moved was managerial work. Next in order were professional and technical, clerical, and, finally, sales jobs. Manufacturing industries provided about a third, and service industries about a fifth, of the white-collar jobs.

3. The average age of the workers when they made the switch to white-collar jobs was 31 years. Intra-company shifters tended to be somewhat older.

4. There are at least three important ways through which white-collar status was achieved: Competence in a complex skill plus certain key personality factors; a certificate or a degree for one or two years of vocationally oriented study at the college level; and some college attendance.

Contract No.: 81-08-23

Contractor: Women's Bureau
U.S. Department of Labor
Washington, D.C.

Principal Staff: Mrs. Mary Dublin Keyserling.

Project Title: Employment Opportunities for Women in Subprofessional Occupations

Objectives and Procedures: Subprofessional occupations which offer employment opportunities for women are to be studied. Attention will focus on the growing number of technician occupations, as well as on such jobs as teachers' aides, social workers' aides, and library assistants, which require 2 or more years of education beyond high school. The study will furnish information on educational and skill requirements, job duties, and earnings.

Status of Project: Completion is scheduled for late 1966.

Contract No.: 81-08-10^s

Contractor: Women's Bureau
U.S. Department of Labor
Washington, D.C.

Principal Staff: Mrs. Mary Dublin Keyserling.

Project Title: Midwest Conference on Vocational Counseling for Girls

Objectives and Procedures: A pilot conference was held for key guidance and placement personnel interested in meeting on a regional and statewide basis to explore methods for improving counseling services to girls and young women. Emphasis was placed on the special aspects of guidance work in light of changing socioeconomic patterns which affect young women. The conference participants from seven Midwestern States represented a cross-section of individuals and agencies active in guidance and placement work with girls in urban, suburban, and rural communities. The seven States represented were Arkansas, Illinois, Indiana, Michigan, Kentucky, Missouri, and Wisconsin.

Status of Project: The meeting was held on February 26-27, 1965 at the Center for Continuing Education, University of Chicago. The final report of the conference, *New Approaches to Counseling Girls in the 1960's: A Report of the Midwest Regional Pilot Conference*, has been issued by the Women's Bureau.

^s This project was jointly sponsored by the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, and the Office of Education, U.S. Department of Health, Education, and Welfare.

Contract No.: 81-08-22

Contractor: Women's Bureau
U.S. Department of Labor
Washington, D.C.

Principal Staff: Mrs. Mary Dublin Keyserling.

Project Title: Women Workers: Their Special Training Needs

Objectives and Procedures: This project will explore the major problems faced by women in the labor

force. Emphasis is to be placed on economically disadvantaged groups and on those with special problems. One group in the latter category will be women who enter the labor force, leave to become housewives, and later re-enter the labor force. These women often need special counseling and guidance service as well as refresher or retraining courses. The project's report will contain a summary section highlighting implications for policy action.

Status of Project: Completion is scheduled for late 1966.

PART 3

INSTITUTIONAL GRANTS

Seven colleges and universities are initiating long-range research programs in the manpower field through grants received during fiscal year 1966. Their programs are summarized in this section.

Grant No.: 91-11-66-60

Institution: Atlanta University
Atlanta, Georgia

Principal Staff: Dr. Harding B. Young.

Major School or Dept.: Graduate School of Business Administration

Research Objectives: Problems of labor force adjustment to a rapidly changing industrial environment will be analyzed. Particular emphasis will be placed on discriminatory problems—barriers to apprenticeship programs and labor union membership, poor communication about job opportunities, and lack of work orientation—that Negroes and members of other disadvantaged groups have in gaining employment. Results will be used to design programs which will help the unemployed overcome handicaps to successful employment.

Developmental Activities: The University will develop the facilities necessary for long-term manpower research. It will encourage study by faculty members with an interest in labor problems, acquire necessary reference material and equipment, and train students for careers in the manpower field.

Grant No.: 91-17-66-61

Institution: Iowa State University
Ames, Iowa

Principal Staff: Dr. Edward B. Jakubauskas.

Major School or Dept.: Industrial Relations Center

Research Objectives: A multi-disciplinary group of scholars from the departments of psychology, sociology, and economics will study human resource problems in the Great Plains States Region comprising the six States of Iowa, North Dakota, South Dakota, Nebraska, Kansas, and Missouri. Of highest priority will be studies leading toward the implementation of manpower programs as a part of a general economic

development plan for the Great Plains States Region. Typical research will include occupational-employment projections for functional economic areas within the region, patterns of labor mobility from rural to urban areas, and employment opportunities and training facilities for women.

Developmental Activities: A manpower research unit within the Industrial Relations Center will be established. This unit will have as its mission the development of a program of co-ordinated manpower research and graduate education for the institutions of higher education in the Great Plains States Region. A nondegree Summer Institute for scholars and advanced graduate students will be offered, as well as research assistantships to graduates of colleges and universities in the region. A clearinghouse of information on current research projects and manpower publications will be established.

Grant No.: 91-21-66-63

Institution: University of Maine
Orono, Maine

Principal Staff: Dr. David H. Clark.

Major School or Dept.: College of Business Administration

Research Objectives: The project will entail construction of a model relating manpower underutilization in Maine to sources which cause it, such as community environment. An interdisciplinary research team will investigate four sectors of community environment in which groups concentrate their activities—educational, economic, political, and social. The structure and values of each sector will be examined by scholars in the several disciplines. They will specify and measure causal relationships between the sectors comprising community environment and underutilization of manpower. Results should be applicable to similar areas throughout the United States.

Developmental Activities: Because the project is interdisciplinary, faculty will profit from contact with

members in other fields by considering common problems from varied viewpoints. The project will serve as the training vehicle for both faculty and graduate students in manpower problems and social science research.

Grant No.: 91-35-66-65

Institution: North Carolina State University at Raleigh
Raleigh, North Carolina

Principal Staff: Dr. Charles E. Bishop, Robert M. Fearn.

Major School or Dept.: Department of Economics

Research Objectives: Investigators will study both manpower problems common to the whole country and those unique to the South. Research will be conducted on the job market behavior of professionals and technicians, on the costs and benefits of retraining workers of different age groups and different skill levels, and on the economic effects of social welfare programs. Studies will try to determine the effect of changing technology on traditional industries—on demand for labor, the degree to which skills are transferable from one occupation to another, and the effect of the growing urbanization of Negroes on their labor force participation.

Developmental Activities: A theoretically based, empirically-oriented program of graduate studies for Ph. D. students specializing in labor economics, human resource development, and manpower policy will be established. This program will culminate in a research workshop. It is expected that faculty members and graduate students at Duke University and the University of North Carolina will participate in the research workshop, both by attending sessions and by presenting papers.

Grant No.: 91-38-66-64

Institution: Oklahoma State University
Stillwater, Oklahoma

Principal Staff: Dr. Joseph J. Klos, Dr. Maurice W. Roney, Dr. Robert W. Scofield, Dr. Solomon Sutker, Dr. James D. Tarver.

Research Objectives: A steering committee composed of a staff member from each of the departments of sociology, economics, industrial education, and psychology will stimulate and coordinate manpower research. Demographic studies will be made with particular reference to population changes in southern towns and cities and labor force participation rates in the Ozark low-income area. Research will also be done in the areas of vocational education, occupational analysis, and public welfare programs.

Developmental Activities: A Manpower Research Center will be established to administer the curriculum for manpower trainees and to coordinate university manpower research. Manpower specialists will be trained in a 2-year program which will lead to an M.S. degree.

Grant No.: 91-40-66-62

Institution: Temple University
Philadelphia, Pennsylvania

Principal Staff: Dr. Louis T. Harms.

Major School or Dept.: Department of Economics

Research Objectives: Research will be conducted on human resource development and employment problems. Specifically, a method of constructing economic models of small regions, including analysis of key industries, population projections, and implications of technical change, will be developed. These models will be used in determining manpower needs and human resource development and in eventual planning for vocational educational facilities and programs.

Developmental Activities: A Ph. D. program in economics is being initiated in Fall 1966. The grant will be used to foster original research by both students and faculty in the manpower field as one aspect of the new Ph. D. program. In addition, the department will develop a team of experts who are trained in the con-

ceptual, methodological, and physical aspects of data processing and in policy application. This team will conduct research, teach, and provide community services in the manpower field.

Grant No. 91-49-66-66

Institution: Virginia State College at Norfolk
Norfolk, Virginia

Principal Staff: Dr. James H. Gadson, Jr.

Major School or Dept.: Departments of Economics,
Sociology, Business Administration, and Psychology

Research Objectives: Scholars from the various
disciplines of the college will be organized into an in-

terdisciplinary manpower research team. The group will examine manpower losses resulting from underutilization of human resources in the Tidewater area of Virginia, and determine to what extent remedial programs can be devised to remedy this problem.

Developmental Activities: A Manpower Utilization Institute will be established. The institute will offer undergraduates in the social sciences training in laboratory techniques usually available only to graduate students at large universities. Institute studies will offer a framework within which to orient individual study by students who are required to do a senior research project. New courses structured around the findings of the proposed study will be added to the curriculum, and courses relating to manpower utilization will be increased at the evening college. The institute will also encourage research by faculty members seeking advanced degrees.

PART 4

GRANTS FOR DOCTORAL DISSERTATIONS

This section describes the grant-supported research of Ph. D. candidates whose dissertations explore manpower issues.

Grant No.: 91-04-66-70

Institution: University of Arkansas
Fayetteville, Arkansas

Doctoral Candidate: Earl Wright, College of Business Administration.

Sponsor: Dr. John M. Peterson.

Dissertation: Industrial Recruiting Experience in Small City Job Markets

Objectives and Procedures: This study will determine sources of labor available to new manufacturing firms in small cities in rural regions and the impact of new plants on recruiting practices and labor supply of other employers in the area.

Managers and employers of new industries will be interviewed to obtain information on skill level, mobility of workers, and sources of labor. Other employers in the area will be questioned to determine the effect of new plants on labor supply conditions.

Estimated Completion Date: June 1967.

Grant No.: 91-23-66-59

Institution: Brandeis University
Waltham, Massachusetts

Doctoral Candidate: Jane Gaudette Jones, The Florence Heller Graduate School for Advanced Studies in Social Welfare and Heller Research Center.

Sponsor: Dr. Stephen J. Miller.

Dissertation: The Career Patterns of Women Physicians

Objectives and Procedures: The study will be concerned with identifying the factors which motivate women to enter the medical profession and the barriers which they must overcome in the pursuit of their goal.

A sample of women students, dropouts, and graduates of the medical schools of Boston University, Tufts

University, and Harvard University will be interviewed about career decisions and about personal and professional career patterns. Key persons in medical education will also be interviewed, in order to delineate the role of women in medicine in the future.

Estimated Completion Date: June 1968.

Grant No.: 91-05-66-09

Institution: University of California at Los Angeles
Los Angeles, California

Doctoral Candidate: Robert Singleton, Department of Economics.

Sponsor: Dr. Jack Hirshleifer.

Dissertation: Labor Force Composition and the Minimum Wage

Objectives and Procedures: The proposition that an increase in the minimum wage causes unemployment among disadvantaged workers will be tested.

Data from the U.S. Department of Labor and the Social Security Administration will be analyzed to determine ability of employers to find alternatives to wage increases, such as early retirement or discharge of marginal workers.

Estimated Completion Date: August 1967.

Grant No.: 91-15-66-21

Institution: University of Chicago
Chicago, Illinois

Doctoral Candidate: Frank H. Maier, Department of Economics.

Sponsor: Dr. T. W. Schultz.

Dissertation: An Economic Analysis of Adoption of Mechanical Cotton Harvesters

Objectives and Procedures: The objectives are to determine the changes in the use of farm labor following the adoption of mechanical cotton harvesters, the factors underlying the increasing use of mechanical cotton harvesters, the causes of the irregular pace of adoption of this labor-saving device among areas and over time, and the likely extent of further mechanization of cotton harvesting.

Profitability of use of the mechanical cotton harvester will be ascertained by obtaining and analyzing data on supply and cost of farm labor in comparison to cost of mechanical harvesting. Further mechanization will be estimated on the basis of findings.

Estimated Completion Date: May 1967.

Grant No.: 91-34-66-31

Institution: Columbia University
New York, New York

Doctoral Candidate: Myron D. Fottler, Graduate School of Business.

Sponsor: Dr. James W. Kuhn.

Dissertation: Training of Nonprofessional Manpower in New York City Hospitals

Objectives and Procedures: The study will evaluate training needs and training effectiveness of nonprofessional hospital workers, who account for most of the employment in the medical services industry. The emphasis will be on those occupations for which the MDTA has trained the greatest number nationally—practical nurse, nurse's aide, and orderly.

Training needs will be determined by examining the relationships among wage rates, necessary skills, sources of manpower supply, and occupational shortages. The evaluation of training effectiveness will be approached through cost-benefit analysis.

Estimated Completion Date: June 1967.

Grant No.: 91-34-66-37

Institution: Columbia University
New York, New York

Doctoral Candidate: Harold Oaklander, Graduate School of Business.

Sponsor: Prof. Ivar Berg.

Dissertation: Some Unanticipated Effects of Advanced Education on a Critical Manpower Resource, the Inservice Teacher

Objectives and Procedures: The primary objective is to show the relationship between level of education and work satisfaction of inservice public school teachers. The assumption of educational policy concerning certification requirements and salary schedules is that advanced education for all public school teachers is automatically beneficial. The author wishes to test the validity of this assumption by obtaining information about the effects of the requirements for graduate education upon the turnover rate of teachers.

Estimated Completion Date: May 1967.

Grant No.: 91-34-66-58

Institution: Columbia University
New York, New York

Doctoral Candidate: Hirsch S. Ruchlin, Department of Economics.

Sponsor: Dr. Aaron W. Warner.

Dissertation: Manpower Resources of the U.S. Off-shore Maritime Industry

Objectives and Procedures: The study seeks to determine the size and the skill composition of the maritime labor force. This information should provide industry and Government officials with a tool to stabilize the labor force or structure it to meet long-run demand. Results will also shed light on factors contributing to either "surpluses" or "shortages" of workers.

Union and Government officials and seamen will be interviewed to determine factors motivating men to enter or leave the industry. Mechanisms for enlarging or diminishing the labor pool as demand fluctuates will be evaluated.

Estimated Completion Date: June 1968.

Grant No.: 91-34-66-47

Institution: Cornell University
Ithaca, New York

Doctoral Candidate: Robert B. Richardson, New York State School of Industrial and Labor Relations.

Sponsor: Dr. Felician F. Foltman.

Dissertation: An Examination of the Transferability of Military Occupational Skills to the Civilian Labor Force

Objectives and Procedures: The purpose of this study is to determine how the technical, professional, and managerial skills necessary for planning modern military strategy are used in civilian occupations.

A group of approximately 5,000 officers and enlisted personnel who were recently separated from the Air Force will form the study population. Mail questionnaires augmented by selected interviews will provide data for statistical analysis.

Estimated Completion Date: Summer 1967.

Grant No.: 91-23-66-15

Institution: Harvard University
Cambridge, Massachusetts

Doctoral Candidate: Richard B. Freeman, Department of Economics.

Sponsor: Dr. John T. Dunlop.

Dissertation: An Economic Analysis of Scientific and Engineering Manpower

Objectives and Procedures: The objective of this study is to obtain information about economic determinants in the job market for scientific and engineering manpower.

Statistical techniques will be used to relate income data to information on the number of advanced degrees conferred in order to determine the importance of economic factors in attracting students to these professions. Students in the Boston area will be surveyed to find what explicit information they have about job opportunities and earnings in different fields. A mathematical

model of the professional and technical job market will be developed and tested with relevant data.

Estimated Completion Date: Summer 1967.

Grant No. 91-23-66-17

Institution: Harvard University
Cambridge, Massachusetts

Doctoral Candidate: Louis Allen Parker, Department of Economics.

Sponsor: Dr. John T. Dunlop.

Dissertation: Adjustments to Technological Change Involving Flight Engineers and Pilots

Objectives and Procedures: This study will be concerned with the process of adjustment of flight engineers and pilots who were required to change occupations, retrain, or relocate when airlines converted from propeller-driven to jet airliners.

Managers, union officials, flight engineers, and pilots of one airline will be interviewed. A number of statistical tests will be performed.

Estimated Completion Date: September 1967.

Grant No.: 91-23-66-16

Institution: Harvard University
Cambridge, Massachusetts

Doctoral Candidate: Llad Phillips, Department of Economics.

Sponsor: Dr. John T. Dunlop.

Dissertation: Dynamics of Labor Turnover in U.S. Industry

Objectives and Procedures: This study seeks to identify the variables affecting the size, variability, and timing of labor turnover in manufacturing and mining industries.

Regression analysis will be used to ascertain the significant economic variables determining the magnitude and seasonal and cyclical variation of types of labor

turnover. A mathematical model of labor turnover rates for a particular industry will be constructed, and the results will be compared with actual turnover rates.

Estimated Completion Date: June 1967.

Grant No.: 91-15-66-52

Institution: University of Illinois
Urbana, Illinois

Doctoral Candidate: Edward W. Haurek, Department of Sociology.

Sponsor: Dr. Joseph R. Gusfield.

Dissertation: Sociological Determinants of College Aspiration, College Curriculum Choice, and Occupational Aspiration Among Working Class Adolescents

Objectives and Procedures: The objective of this study is to test the hypothesis that the environment of working class adolescents causes them to differ from middle-class children in value placed on a college education and in the choice of an occupation.

Data from Project TALENT will be used to compare values and characteristics of middle-class and working-class adolescents. Statistical techniques will be utilized in comparison of aspirations, achievements, aptitudes, relationships with fellow students, degree of parental supervision, occupational choices, and motivations for college attendance.

Estimated Completion Date: September 1967.

Grant No.: 91-23-66-36

Institution: Massachusetts Institute of Technology
Cambridge, Massachusetts

Doctoral Candidate: Malcolm S. Cohen, Department of Economics.

Sponsor: Dr. Edwin Kuh.

Dissertation: The Determinants of the Relative Unemployment of Skilled and Unskilled Workers

Objectives and Procedures: This study will determine the effect of wages, technical change, and other variables on the relative employment of skilled and unskilled workers in order that policymakers may better understand why unskilled workers have a higher unemployment rate than skilled workers.

Regression analysis will be used to determine the amount of variation in employment that can be accounted for by the above factors.

Estimated Completion Date: March 1967.

Grant No.: 91-21-66-44

Institution: Michigan State University
East Lansing, Michigan

Doctoral Candidate: John Pease, Department of Sociology.

Sponsor: Dr. William H. Form.

Dissertation: Economic Mobility in an Affluent Community

Objectives and Procedures: The major objectives of this study are to describe and analyze the sources of economic mobility and immobility in an affluent community and to specify the factors which result in its transmission from one generation to the next.

Spending units in Lansing, Mich., a relatively affluent community in which 81 percent of the families earn more than \$4,000 annually, will be interviewed in order to find the relationship between the income level of one generation and the next.

Estimated Completion Date: June 1967.

Grant No.: 91-24-66-45

Institution: Michigan State University
East Lansing, Michigan

Doctoral Candidate: Joan H. Rytina, Department of Sociology.

Sponsor: Dr. William H. Form.

Dissertation: The Effect of Economic Position on Perception of Economic Opportunities

Objectives and Procedures: The major objective of this study is to assess the extent to which the poor perceive economic mobility as a real possibility. The hypothesis is that belief in economic opportunity is rooted in perception of others in a similar position who have actually moved up.

Interviews will determine the economic class position of family heads in order to test the relationship between this factor and the head's belief about equality of opportunity in America.

Estimated Completion Date: June 1967.

Grant No.: 91-24-66-43

Institution: Michigan State University
East Lansing, Michigan

Doctoral Candidate: Worth C. Summers, Department of Sociology.

Sponsor: Dr. William A. Faunce.

Dissertation: The Impact of Work Organization on Commitment to and Participation in a Scientific Discipline

Objectives and Procedures: An attempt will be made to determine how and to what degree the distribution of scientists in compatible and incompatible organizational situations changes professional participation and commitment in the field of microbiology.

Questionnaires mailed to members of the American Society for Microbiology will be used to determine the effect of work settings upon their commitment to and participation in their discipline.

Estimated Completion Date: December 1966.

Grant No.: 91-24-66-22

Institution: University of Michigan
Ann Arbor, Michigan

Doctoral Candidate: James A. Sweet, Department of Sociology.

Sponsor: Dr. Otis Dudley Duncan.

Dissertation: Family Composition and the Labor Force Participation of Married Women

Objectives and Procedures: This study will examine the influence of family composition on the labor force activities of married women in the United States. The presence of children in the household and their ages will be the major variables studied. Other factors, including characteristics of the women, e.g., their age, race, education, place of origin, and characteristics of their husbands and families, e.g., husband's income and employment status, will be utilized as controls, and interactions between them and household composition variables will be examined.

Data from the U.S. Bureau of the Census, largely from the 1/1000 sample tape from the 1960 Census of Population, will be used. Multivariate statistical methods will be employed for analysis.

Estimated Completion Date: September 1967.

Grant No.: 91-34-66-18

Institution: New York University
New York, New York

Doctoral Candidate: Warren Mintz, Department of Sociology.

Sponsor: Dr. Sidney Aronson.

Dissertation: A Study of Variables Involved in the Successful Adaptation of Agricultural Migrant Families

Objectives and Procedures: This study is designed to uncover mechanisms which successful migrant families use to keep themselves well-organized and immune from the disrupting conditions that one would ordinarily expect for people in such circumstances.

The investigator will stay with migrant families as a member of their work unit in order to collect data on the intrafamily relationships and on the relation of the family to the social and economic communities in which it finds work.

Estimated Completion Date: June 1968.

Grant No.: 91-37-66-13

Institution: Ohio State University Research Foundation
Columbus, Ohio

Doctoral Candidate: L. Emil Areider, Department of Economics.

Sponsor: Dr. Herbert S. Parnes.

Dissertation: Development and Utilization of Managerial Talent: A Labor Market Study of Managers in Manufacturing Establishments

Objectives and Procedures: This study will provide hypotheses on labor market experience, mobility patterns, and training of managers.

Managers in Columbus, Ohio will be questioned about work experience and educational development.

Estimated Completion Date: March 1967.

Grant No.: 91-37-66-40

Institution: Ohio State University Research Foundation
Columbus, Ohio

Doctoral Candidate: Paul B. Miller, Department of Economics.

Sponsor: Dr. Glenn W. Miller.

Dissertation: An Analysis of Government Training Programs in Ohio

Objectives and Procedures: This study is designed to augment currently available data on work experience of MDTA course graduates in Ohio.

Records of both graduates who have found employment and those who are still unemployed will be analyzed to determine if there are important differences among trainees in personal and work experience which affect their methods, ability, and willingness to adapt to the world of work.

Estimated Completion Date: April 1967.

Grant No.: 91-38-66-50

Institution: Oklahoma State University of Agriculture and Applied Science Research Foundation
Stillwater, Oklahoma

Doctoral Candidate: Gerald E. Boggs, Department of Education.

Sponsor: Dr. Harry K. Brobst.

Dissertation: A Comparative Analysis of the Impact of Various Types of Curricula on the Vocational Success of School Dropouts

Objectives and Procedures: This study will compare the vocational success of school dropouts who received training in various types of curricula in MDTA programs with school dropouts who received little or no training.

Measures of vocational success as indicated by wages, number of jobs held, days unemployed, job performance, and job satisfaction will be obtained for jobs held 1 year after training in the MDTA program.

Statistical techniques will be used to evaluate data.

Estimated Completion Date: June 1967.

Grant No.: 91-38-66-12

Institution: Oklahoma State University of Agriculture and Applied Science Research Foundation
Stillwater, Oklahoma

Doctoral Candidate: Gaylen R. Wallace, Department of Education.

Sponsor: Dr. Victor O. Hornbostel.

Dissertation: An Analysis of Job Satisfaction of Employed Youth Involved in an Experimental School Dropout Rehabilitation Program in Oklahoma City

Objectives and Procedures: This study will examine differences in job satisfaction among employed youth receiving vocational training, academic training, or a combination of both in a school dropout rehabilitation program. Adjustments will be made for variables pertaining to certain work situations and personal characteristics.

Youths who completed the program as well as those who were not enrolled or who dropped out well before completion will be tested and interviewed to determine job satisfaction. Multivariate analyses, including regression analysis and covariance analysis, will be used to evaluate the data.

Estimated Completion Date: Winter 1966.

Grant No.: 91-32-66-20

Institution: Princeton University
Princeton, New Jersey

Doctoral Candidate: Stanley W. Huff, Department of Economics.

Sponsor: Dr. Frederick H. Harbison.

Dissertation: Hiring Practices, Hiring Standards, and Manpower Development Policies of Selected Employing Institutions in Labor Markets with Differing Rates of Unemployment

Objectives and Procedures: This project will study the differences in wages of comparable occupations and the recruiting policies of employers between the adjacent job markets of Steubenville, Ohio-Weirton, W. Va., which has a low rate of unemployment, and Wheeling, W. Va., where the rate of unemployment is above the national average.

Personnel managers of firms in both areas will be interviewed to determine differences in hiring policies.

Estimated Completion Date: June 1967.

Grant No.: 91-05-66-24

Institution: Stanford University
Stanford, California

Doctoral Candidate: Paul D. Gayer, Department of Economics.

Sponsor: Dr. Melvin W. Reder.

Dissertation: Manpower Effects of Cuban Immigrant Flows, 1959-66

Objectives and Procedures: The study will assess the mechanisms by which the U.S. economy as a whole and the job market of the Miami area adjusted to the inflow of political refugees from Cuba.

Actions of Federal, State, and local authorities to cope with inflows of refugees will be appraised. A competitive model for the Miami job market will be constructed, and results compared with actual conditions in the job market.

Estimated Completion Date: June 1968.

Grant No.: 91-51-66-54

Institution: University of Washington
Seattle, Washington

Doctoral Candidate: Stephen E. Baldwin, Department of Economics.

Sponsor: Dr. J. B. Gillingham.

Dissertation: Impact of Governmental Programs on Employment of Youth in the Seattle Labor Market

Objectives and Procedures: This study will analyze job market entry and experience of disadvantaged Seattle teenagers during the current period of exceptionally rapid regional economic expansion. It will also assess the effectiveness of various public agencies and special programs designed to facilitate the assimilation of this group into the labor force.

Youths will be interviewed about their job market experience. Standard analytical techniques will be used to relate data to factors relevant to success, including age, sex, race, family characteristics, and education. Particular effort will be made to determine the relative job effectiveness of youths who participated in training programs of various public agencies.

Estimated Completion Date: September 1967.

Grant No.: 91-24-66-14

Institution: Wayne State University
Detroit, Michigan

Doctoral Candidate: Stig Ralstrom, Department of Industrial Education.

Sponsor: Dr. G. Harold Silvius.

Dissertation: Teaching Practices for Preventing Dropouts

Objectives and Procedures: The objective of this study is to determine the most effective teaching practices that instructors of industrial education can use to prevent school dropouts.

Research studies, ratings by experts, and statistical studies of school records will be used to determine the most effective practices for preventing school dropouts.

Estimated Completion Date: March 1967.

Grant No.: 91-53-66-11

Institution: University of Wisconsin
Madison, Wisconsin

Doctoral Candidate: James S. Crabtree, Department of Industrial Relations.

Sponsor: Dr. Alan Filley.

Dissertation: The Structure of Related Instruction in Wisconsin Apprenticeship Programs

Objectives and Procedures: The objective of this study is to develop a current description of apprenticeship programs of related instruction in Wisconsin schools of vocational education. The structure will provide a framework for evaluating this kind of educational process in the light of present and future skilled manpower expectations and needs in the State.

Information will be collected from the Apprenticeship Division, the State Board of Vocational and Adult Education, and the local vocational schools by questionnaire, interview, and review of historical records. Data will be analyzed and presented in both narrative and tabular form.

Estimated Completion Date: February 1967.

Grant No.: 91-53-66-68

Institution: University of Wisconsin
Madison, Wisconsin

Doctoral Candidate: Leonard J. Hausman, Department of Economics.

Sponsor: Dr. Gerald G. Somers.

Dissertation: Using Monetary Incentives to Motivate and Stabilize the Employment of Welfare Recipients

Objectives and Procedures: The objectives of this study are to determine the significance of the use of financial incentives in motivating welfare recipients to seek employment and to evaluate alternative incentive plans.

The number of employable persons who can earn more by welfare payments than by working will be determined, and alternative incentive systems will be devised.

Estimated Completion Date: July 1967.

Grant No.: 91-53-66-69

Institution: University of Wisconsin
Madison, Wisconsin

Doctoral Candidate: Walter Hubner, Industrial Relations Research Institute.

Sponsor: Dr. Alan Filley.

Dissertation: Individual Need Satisfaction in Work and Non-Work

Objectives and Procedures: This study will explore the motivations of workers, the satisfactions that workers desire from work as well as non-work, the nature of the strategies that individuals use in approaching work, and the manner in which technology affects jobs and job occupants.

A forced-choice questionnaire will be administered to a sample of skilled and unskilled blue-collar workers. The questionnaire will measure the degree to which psychological needs are satisfied by working.

Estimated Completion Date: September 1967.

Grant No.: 91-53-66-10

Institution: University of Wisconsin
Madison, Wisconsin

Doctoral Candidate: Collette Moser, Department of Economics.

Sponsor: Dr. Gerald G. Somers.

Dissertation: An Evaluation of Area Skill Surveys as a Basis for Manpower Policies

Objectives and Procedures: The objective of this study is to evaluate Area Skill Surveys and Training Needs Surveys. These surveys are conducted in cooperation with public employment agencies in order to predict occupational needs for 2 to 5 years.

The content and methodology of the present surveys will be appraised, and accuracy of predictions will be measured by a followup study. Officials will be interviewed to determine the requirements of a successful survey and the extent to which surveys are utilized by employers and vocational program planners.

Estimated Completion Date: February 1967.

Grant No.: 91-53-66-26

Institution: University of Wisconsin
Madison, Wisconsin

Doctoral Candidate: Wilbur J. Smith, Department of Economics.

Sponsor: Dr. Harold Groves.

Dissertation: The Cost and Benefits of Unemployment, Retraining, and Relocation in an Economically Depressed Area: A Case Study of Five Counties in West Virginia

Objectives and Procedures: This study will measure the cost and benefits of retraining the unemployed in terms of how well course offerings met the needs of the local job market, increased the occupational and geographical mobility, improved employment and earnings, and increased the working life of trainees. It will also determine the effect of recently instituted retraining programs on the amount and kind of social welfare payments.

Research will utilize data from interviews, from social security files, and from analysis of cost of retraining programs and welfare programs. Detailed statistical analysis and correlations of these data will be made.

Estimated Completion Date: September 1967.

Grant No.: 91-53-66-27

Institution: University of Wisconsin
Madison, Wisconsin

Doctoral Candidate: Jack H. Snyder, Industrial Relations Research Institute.

Sponsor: Dr. Gerald G. Somers.

Dissertation: Personal and Behavioral Factors Affecting the Supply of the Self-Employed

Objectives and Procedures: The objectives of this study are to uncover the personal and behavioral factors governing the supply of self-employed, to compare owner-managers with hired managers, and to forecast on the basis of personal factors the supply of owner-managers in retail and service industries.

Survey data will be compiled by interviewing and testing a sample of owner-managers in Madison, Wis.

A representative group of hired managers will be selected for comparison. Statistical methods will be used to evaluate the data.

Estimated Completion Date: September 1967.

Grant No.: 91-07-66-19

Institution: Yale University
New Haven, Connecticut

Doctoral Candidate: Robert Goldfarb, Department of Economics.

Sponsor: Dr. Mark W. Leiserson.

Dissertation: A Benefit Cost Study of New Haven's Work-Training Programs

Objectives and Procedures: This study will measure the relative effectiveness, in terms of income improvement, of various work-training programs in New Haven.

Comparable measures of benefits and costs for each program will be developed based on data to be collected from Community Progress, Inc. on the expense of programs and income of participants after training.

Estimated Completion Date: November 1968.

Grant No.: 91-07-66-06

Institution: Yale University
New Haven, Connecticut

Doctoral Candidate: Daniel C. Rogers, Department of Economics.

Sponsor: Dr. Neil W. Chamberlain.

Dissertation: The Effect of Education on Income

Objectives and Procedures: The objective of this study is to determine the increase in lifetime income which is due to additional education, as distinct from intelligence or a combination of other determinants.

Students of Connecticut junior high schools and certain private schools in 1934 and 1935 who were given intelligence tests will be traced and queried about education, work experience, background, social status, and income. From this information, a multiple regression will be run using income as the dependent variable.

Estimated Completion Date: December 1966.

PART 5

GRANTS FOR RESEARCH PROJECTS

This section describes the grant-supported projects of specialists in a variety of disciplines who are examining key questions related to manpower.

Grant No.: 91-09-66-25

Institution: The American University
Washington, D.C.

Principal Staff: Dr. Charles A. Dailey, School of
Business Administration.

Project Title: Use of Programed Case Technique for
Increasing Job Opportunities.

Objectives and Procedures: The general objective
of this project is to provide a means of expanding job
opportunities for workers who come from ethnic groups
which traditionally have been disadvantaged.

The study will approach the problem of minimizing
discrimination in personnel administration by teaching
executives to appraise employees as individuals. The
expected product of the study is a design for a labora-
tory training program which will teach key personnel
to estimate career potential. To lessen the adminis-
trator's dependence on tests and oversimplified impres-
sions, in-depth case studies will be introduced as tools
for appraising the capabilities of an employee. Ap-
praisals will be validated against performance.

Estimated Completion Date: January 1967.

Grant No.: 91-03-66-39

Institution: University of Arizona
Tucson, Arizona

Principal Staff: Dr. Trevor Bain, College of Business
and Public Administration.

Project Title: The Impact of Defense Contract Termi-
nation on the Labor Force

Objectives and Procedures: This project is con-
cerned with the ability of current manpower programs
to meet the needs of workers displaced by defense con-
tract cancellations. Findings will be based on case
studies of the re-employment experiences of personnel

laid off by the Hughes Company plant in Tucson during
cancellation of the mobile missile program. The
Hughes work force had been recruited nationally and
integrated into the relatively isolated city of Tucson,
whose largest manufacturing firm is the Hughes plant.
The area presented few comparable occupational
choices for defense-oriented production, technical, and
professional personnel. The extent to which manpower
programs were adaptable to this atypical situation will
be determined through statistical analysis of question-
naire and interview data which have already been col-
lected from a sample of the 2,300 employees whose jobs
were terminated between 1963 and 1966.

Estimated Completion Date: December 1966.

Grant No.: 91-37-66-71

Institution: Bowling Green State University
Bowling Green, Ohio

Principal Staff: Dr. Robert M. Guion, Department of
Psychology.

Project Title: The Meaning of Work and its Relation
to the Development of the Motivation to Work

Objectives and Procedures: This study will attempt
to determine what meaning work has for the individual
leaving school to begin his career, the development of
his concept of work, and how it influences his motiva-
tion during early employment experience. Engineer-
ing and factory personnel to be hired from colleges and
high schools will be identified by several companies
participating in the project. On the basis of extensive
pre-employment testing, the subject will be classified as
"task-oriented," "socially-oriented," or "self-oriented"
when he begins his new job. The group with which he
starts work will be classified as "work-oriented" or
"not-work-oriented." The relationship between mean-
ing of work and motivation, assessed by co-worker
ratings, will be studied independently for each classifi-
cation.

Estimated Completion Date: June 1968.

Grant No.: 91-09-66-33

Institution: Bureau of Social Science Research, Inc.
Washington, D.C.

Principal Staff: Dr. Louise Ann Johnson, Dr. Leonard Goodman.

Project Title: Enrollment, Termination and Program Outcomes of Neighborhood Youth Corps Youth as Related to Their Economic Needs—A Planning Study

Objectives and Procedures: This study identified the major components of the cost of maintaining Neighborhood Youth Corps enrollees both in school and out of school; identified some of the dimensions along which these cost components might be expected to vary; developed a model within which enrollees' financial requirements were determined by family budget, income, and standard of living; designed and pretested survey instruments; and designed a field survey.

A literature review supplemented interviews with personnel in Washington agencies participating in the Neighborhood Youth Corps program. An inventory of cost components was compiled and translated into an appropriate questionnaire format for each category of respondents. A multistage sampling design was worked out to provide for the selection of the categories of the informants.

Completion Date: September 1966.

Highlights of Findings: A pilot study has been designed and is being evaluated. The research tools for obtaining the desired data have been developed and pretested.

Grant No.: 91-09-66-07

Institution: Bureau of Social Science Research, Inc.
Washington, D.C.

Principal Staff: Mrs. Laure M. Sharp.

Project Title: Occupational Adjustment of Recent Low-Income Southern In-Migrants to a Northern City

Objectives and Procedures: The objective of this project was to develop a detailed design for the first phase of a planned three-phase project which would

investigate demographic, social, occupational, and attitudinal characteristics of recent in-migrants to a northern city. Subsequent phases, to be developed at a later time, will involve the design of an experimental counseling and training program, followup, and evaluation.

The procedures included: A thorough review of the literature to identify past research and ongoing research on this and related topics; an analysis of Census and other statistics to determine the most appropriate locale for the study; preliminary field work to determine appropriate sampling approaches in consultation with sampling experts; and a final research design, with special emphasis on stratification factors.

Completion Date: June 1966.

Highlights of Findings: As the result of this grant a contract was awarded to BSSR for the conduct of a similar study in the Cleveland Area. (See contract 81-09-66-27.)

Several operating groups were also contacted for interest in development of Phase II of the major project, the action phase.

A bibliography was appended to the research proposal for the overall study and an appropriate sampling design was also included.

Grant No.: 91-51-66-51

Institution: Central Washington State College
Ellensburg, Washington

Principal Staff: Dr. Clayton C. Denman, Department of Anthropology.

Project Title: Ethnic Differences and Historical Change in Manpower Resources of a Small Town

Objectives and Procedures: This study is concerned with a community which, deprived of its major sources of employment and beset by ethnic group division, is being bypassed by economic growth and development. Data collected through interviews with business owners, managers, and employees in Cle Elum, Wash., will provide a basis for an analysis of past and present ethnic traditions and employment patterns. This analysis is expected to give rise to suggestions for promoting employment opportunities for the town's citizens. More generally, the results may be useful in implement-

ing future programs of manpower development in other economically stagnant communities in the United States.

Estimated Completion Date: Early 1968.

Grant No.: 91-34-66-41

Institution: Cornell University
Ithaca, New York

Principal Staff: Dr. Leonard P. Adams, School of Industrial and Labor Relations; Dr. Olaf F. Larson, College of Agriculture.

Project Title: Case Studies of Viable Worker-Management Relationships on Farms in New York State

Objectives and Procedures: The primary purpose of this study is to determine viable farmer-worker relationships. Investigation will be conducted through interviews involving 15 to 20 farmers and their year-round workers, and 8 to 12 cases where the farmer is dependent upon seasonal workers. Examination of seasonal farm labor problems will involve a study of the process of recruitment, of the role of the New York Employment Service, of the relationships between the farmer and workers, of labor camps and their operation, of the incentive system, of human relations questions, and of the economics of the farm enterprise.

Case-study findings will form the basis for a discussion by a committee of faculty members from the School of Industrial and Labor Relations and the Agricultural College, which is attempting to develop constructive farm manpower policies and programs.

Estimated Completion Date: December 1966.

Grant No.: 91-34-66-49

Institution: Cornell University
Ithaca, New York

Principal Staff: Dr. William H. Friedland, New York State School of Industrial and Labor Relations.

Project Title: Migrant Labor as a Form of Intermittent Social Organization and as a Channel for Geographic Mobility

Objectives and Procedures: This is the first part of an extensive, long-term study of the theoretical and practical problems pertaining to seasonal farm labor in the eastern United States. It will focus upon a single migrant labor camp during the summer of 1966. The researchers will act essentially as observers, maintaining diaries, observing the behavior and attitudes of migrants, management, crew leaders, and farmers, and collecting information through interviews. Subsequent contacts with migrants who remain in the North will provide more systematic data on adaptation problems.

Estimated Completion Date: July 1967.

Grant Nos.: 91-17-01, 02, 03, 04

Institutions: Dillard University
New Orleans, Louisiana
Grambling College
Grambling, Louisiana
Southern University A & M College
Baton Rouge, Louisiana
Xavier University
New Orleans, Louisiana

Principal Staff: Dr. Daniel C. Thompson, Dillard University; Dr. Charles A. Berry, Grambling College; Dr. F. C. Temple, Southern University A&M College; Lois G. Taplin, Xavier University.

Project Title: A Followup Study of the 1964 Graduates of Four Negro Louisiana Colleges

Objectives and Procedures: The four grantee colleges sought to determine the employment history since graduation of their 1,350 graduates of 1964. Economic data and sociological and demographic characteristics were gathered through a mail survey. Supplementary information from the college records concerning class standing and fields of study were analyzed in combination with the survey data to ascertain the extent to which the skills and competencies of these graduates were being used. This information provided the basis for comparisons with information from graduates of predominately white colleges in Louisiana. It is expected the analyses of these schools will point to re-evaluation of their curricula to meet the needs of graduates now faced with much broader employment opportunities than in the past.

Completion Date: March 1966.

Highlights of Findings: The results of these studies were reviewed and synthesized in a final report prepared by the National Opinion Research Center. (See Grant Number 91-15-66-01.)

Grant No.: 91-09-66-23

Institution: The George Washington University
Washington, D.C.

Principal Staff: Dr. John H. Norton, School of Government and Business Administration.

Project Title: Methods for Accuracy Analysis and Sensitivity Analysis for Projections of Area Labor Force, Employment and Unemployment

Objectives and Procedures: The basic objective of this project is to extend and adapt current methods of accuracy and sensitivity analysis to manpower projections. Findings will demonstrate the applicability of the methods to specific types of area labor force forecasts and employment and unemployment projections.

Estimated Completion Date: June 1967.

Grant No.: 91-11-66-46

Institution: University of Georgia
Athens, Georgia

Principal Staff: Dr. Ethel Bengree Jones, Department of Economics.

Project Title: A Feasibility Study to Identify the Underemployed and to Examine the Labor Market Attachment of Labor Force Nonparticipants in a Low Income Area

Objectives and Procedures: The objective will be to design and test a household interview questionnaire which can be used by the Bureau of the Census to identify and measure underemployment. Also, a method of measuring the willingness to work of those who are not seeking employment because of lack of local opportunities, will be developed.

A questionnaire will be designed and tested in household interviews in three counties of northeast Georgia in which the average income level is low.

Estimated Completion Date: July 1967.

Grant No.: 91-15-66-29

Institution: University of Illinois
Champaign, Illinois

Principal Staff: Dr. Adolf Sturmthal, Institute of Labor and Industrial Relations.

Project Title: Forecasting Manpower Requirements on the Basis of Historical Data

Objectives and Procedures: This study is an experiment in the application of available forecasting techniques to actual historical data for a given industry. Historic statistical information available in 1945 will be used as a basis for projecting aggregate employment and occupational distribution of employment in the Class I railroads industry up to the present. Forecasts will be compared with actual figures to test the validity of frequently used forecasting techniques.

Estimated Completion Date: February 1967.

Grant No.: 91-16-66-32

Institution: Indiana University Foundation
Bloomington, Indiana

Principal Staff: Dr. C. L. Christenson and Dr. W. H. Andrews, Department of Economics and Division of Economic Research.

Project Title: A Study of Labor Force Adaptation to Technical Change in the Coal Industry

Objectives and Procedures: This study will analyze changing skill requirements and adjustment problems in an industry where rapid technological development has affected sizable segments of the labor force. The experience of the U.S. bituminous coal mining industry between 1956-65 will be examined to determine the relations of productivity and employment changes to such variables as geographic distribution of production, production in different types of mines, labor produc-

tivity, extent of total or partial unemployment, and degree of regional economic development in the areas involved. The adequacy of arrangements for retirement, transfer, and retraining of workers displaced during this period will be assessed. Research procedures will include statistical analysis of available data and the gathering of material through interviews at employment and training centers.

Estimated Completion Date: June 1967.

Grant No.: 91-22-66-08

Institution: University of Maryland
College Park, Maryland

Principal Staff: Dr. Paul Wasserman and Dr. Mary Lee Bundy; School of Library and Information Services.

Project Title: Manpower Utilization and Requirements in Library and Information Services

Objectives and Procedures: This project developed a blueprint for a full-scale, coordinated investigation of manpower needs and manpower utilization in libraries and allied information services. After thorough analysis and review of relevant literature and preparation of background materials, manpower, social science, and library authorities participated in a 3-day seminar to consider key manpower problems in the field of library services. Ideas and research avenues opened up during the seminar were incorporated into a detailed plan for further research which is expected to follow.

Completion Date: September 1966.

Highlights of Findings: Technological innovations in the storage of documents and the transmission of information are revolutionizing information services. Creative and enterprising individuals are needed to influence change imaginatively, or to foster new alternatives.

A detailed proposal for a study on the executive in library and information activity has been designed for active consideration. Other topics suggested for future research include: The economics of library and information services; the image and status of librarians and information workers; and the sociology of the information professions.

Grant No.: 91-20-06

Institution: Massachusetts Institute of Technology
Cambridge, Massachusetts

Principal Staff: Dr. Robert Evans, Jr., Department of Industrial Relations; Dr. George E. Delehanty, Department of Economics.

Project Title: Low-Wage Employment: An Inventory and an Assessment

Objectives and Procedures: This project investigated the low-wage sector of the economy and the probable effect on this sector of various policies to reduce poverty and create jobs. A number of hypotheses were examined which may help explain the functioning of low-wage labor groups.

An evaluation was made of the availability and suitability of various sources of data, and recommendations on obtaining other appropriate data as a basis for a larger research plan were presented.

Completion Date: October 1965.

Highlights of Findings: Low-wage employment has been historically concentrated in seven manufacturing industries, service industries, and retail trade industries; it has been concentrated geographically in the South Atlantic States. Low-wage manufacturing industries were characterized by slow rates of growth in employment and wages and low levels of productivity and industry profits. Low-wage workers usually held part-time, part-year jobs in services or manual labor. Educational levels appeared to be associated with differences in earnings across occupational lines, but the pattern was not so clear within groups.

Given the internal stability of the manufacturing portion of the low-wage sector, and the role of continued supplies of potential low-wage labor, the solution to the low-wage problem is essentially one of increasing total productivity sufficiently to raise the level of low wages to a satisfactory standard.

Grant No.: 91-23-66-55

Institution: University of Massachusetts
Amherst, Massachusetts

Principal Staff: Dr. Everett Lee, Department of Sociology and Anthropology.

Project Title: Spatial Mobility and Manpower Development

Objectives and Procedures: This study will examine the implications for manpower development and training of migration to, from, and within the States of Pennsylvania and Mississippi. Census data will be used to determine the extent to which the two States are dependent upon manpower from other States, the extent to which the two States are developing manpower for other States, and the types of manpower migrating to and from the two States. Standard demographic techniques of analysis will be applied to the volume or rate of in- and out-migration for specific race-sex-education-age groups.

Estimated Completion Date: September 1967.

Grant No.: 91-24-66-30

Institution: Michigan State University
East Lansing, Michigan

Principal Staff: Dr. Michael E. Borus, School of Labor and Industrial Relations.

Project Title: Research to Demonstrate the Uses of Unemployment Insurance Wage Reports

Objectives and Procedures: The goal of this project is to demonstrate that individual wage reports are potentially valuable as a source of information in the study of manpower problems. To illustrate the applicability of the wage reports to manpower research, three sub-studies will be made, using the reports as a primary source of data: (1) Post-retraining earnings and the unemployment experience of retrained workers will be examined to supplement and check the validity of information derived from present retraining follow-ups and to determine which groups profit most from retraining; (2) the costs and benefits of various vocational education programs will be compared; and (3) the accuracy of data obtained through personal interviews and mail questionnaires will be checked through a comparison with parallel information secured from the wage reports and Social Security records.

Estimated Completion Date: June 1968.

Grant No.: 91-24-66-42

Institution: Michigan State University
East Lansing, Michigan

Principal Staff: Dr. James R. Hundley, Jr., Department of Sociology.

Project Title: A Study of Interpersonal Relationships Among Managers and Employees of Fruit and Vegetable Farms with Emphasis on Labor-Management Practices Utilized

Objectives and Procedures: This study will analyze labor-management relations in fruit and vegetable farms in Michigan. Managers of 100 farms, selected in a random area sample of the 10 major agricultural counties in Michigan, will be queried as to size of farm, commodities produced, and hiring practices. From this information, 25 to 30 farms will be selected to represent the various sizes and types of farming. Researchers will spend 1 week at each farm, observing the work environment during the day and administering structured and unstructured interviews to managers and workers in the evening.

Estimated Completion Date: December 1967.

Grant No.: 91-21-05

Institution: University of Michigan
Survey Research Center
Ann Arbor, Michigan

Principal Staff: Dr. Eva Mueller, Dr. John Parker, John Sonquist.

Project Title: Pilot Study of the Impact of Changes in Machine Technology on a Cross-Section of the Labor Force

Objectives and Procedures: The primary goal of this study was to develop a questionnaire to determine the extent to which people notice changes in their job content and employment conditions which were brought about by changes in machine technology.

The objectives embodied in the questionnaire were: (1) To measure the proportion of the labor force who believed that their job content was altered by various types of changes in machine technology during a recent period; (2) to obtain information about people's perceptions of the direction of change in their job content brought about by such changes; (3) to investigate the immediate personal experience and adjustments fol-

lowing from these changes; (4) to study the impact of the changes on recent occupational progress or careers and on expectations and aspirations; and (5) to compare the impact of automation on various kinds of workers.

Completion Date: January 1966.

Highlights of Findings: The importance of this study lies in the fact that it represents the first attempt at a cross-sectional study of changes in machine technology. It showed that a large-scale field survey of the working population is feasible, that the questionnaire which was developed is workable, and that the information obtained is understandable and codable. The questionnaire will be used in a larger study of the labor force.

Grant No.: 91-24-66-03

Institution: University of Michigan-Wayne State University
Ann Arbor, Michigan

Principal Staff: Dr. Louis A. Ferman, Institute of Labor and Industrial Relations.

Project Title: Community Organization and the Mobilization of Resources for Manpower Development Programs

Objectives and Procedures: The ultimate objective of this project is to test the feasibility of using various social and economic variables to predict local receptivity to Federal development programs and to determine the number and kinds of programs likely to be successful in a given community. The researcher will approach the problem of community participation in Government programs by exploring several characteristics of community structure that account for variations in local receptivity to Federal programs.

Data will be collected from the documents and official records of local and State agencies in all communities in the United States with populations of over 25,000. Multivariate analysis will be used to relate the variables to measures of community resource mobilization. Other appropriate statistical techniques will be used in developing actuarial statements.

Estimated Completion Date: March 1967.

Grant No.: 91-27-66-02

Institution: University of Missouri
Columbia, Missouri

Principal Staff: Dr. Rex R. Campbell, Department of Rural Sociology.

Project Title: Job Opportunities and Job Discrimination as Perceived by Adults of Low Socio-economic Status

Objectives and Procedures: The first objective is to determine the attitudes and knowledge of disadvantaged Negroes and whites concerning job opportunities. The second objective is methodological. It will determine the feasibility of obtaining objective research data from respondents when interviewers are of a different race from interviewees. Information has already been gathered through personal interviews with a random sample of 1,500 adults in low-income urban areas of Missouri. Regression analysis will be based on the processed and tabulated data, using race and socio-economic status as independent variables.

Estimated Completion Date: July 1967.

Grant No.: 91-15-66-01

Institution: National Opinion Research Center
Chicago, Illinois

Principal Staff: Dr. Richard Jaffe.

Project Title: College, Color, and Employment: Racial Differences in Postgraduate Employment Among 1964 Graduates of Louisiana Colleges

Objectives and Procedures: Information was obtained on the employment history and sociological and demographic characteristics of students graduating in the 1964 classes of three predominantly white colleges in Louisiana. These data were compared with similar information on graduates from four predominantly Negro colleges in Louisiana (obtained from concurrent grant studies, numbers 91-17-01, 02, 03, and 04). The analytical comparisons made covered job placement, employment experience, wage income and other factors.

Completion Date: The final report was received in July 1966.

Highlights of Findings: 1. Graduates of the predominantly Negro colleges of Louisiana were more likely than their white counterparts to have been unemployed, and to have been unemployed for longer periods of time.

2. Over half of all male Negro graduates entered the teaching profession, and they began at lower salaries than whites. Male whites were three times as likely as male Negroes to begin teaching school at a salary of over \$4,000. This salary differential between Negro and white teachers was even greater 15 months after graduation.

3. The Negro graduate was less likely than his white counterpart to attend graduate school, although he was considerably more likely to indicate a desire for graduate training.

4. Although the authors warn of limitations in the data, they state that "if data from the seven Louisiana schools at all represent the experiences of graduates from the two southern systems (predominantly white versus predominantly Negro) generally, then there is little reason to expect that the graduates of predominantly Negro colleges will be able to bridge the racial gap in economic opportunity."

Grant No.: 91-34-66-57

Institution: New York University
New York, New York

Principal Staff: Dr. Abraham L. Gitlow, School of Commerce.

Project Title: Unskilled Workers in the Labor Force: Problems and Proposals

Objectives and Procedures: This grant helped to support a half-day conference for 500 employers in New York City. By demonstrating to employers that, by hiring the handicapped, they not only help expand job opportunities for the handicapped but also help fill their own shortages of unskilled workers, it showed that both problems can be alleviated.

Completion Date: The Conference was held on September 29, 1966, and a report is expected to be submitted by the end of 1966.

Grant No.: 91-39-66-38

Institution: University of Oregon
Eugene, Oregon

Principal Staff: Dr. Donald A. Watson, Bureau of Business and Economic Research.

Project Title: An Input-Output Model for Use in Manpower Projections for a State

Objectives and Procedures: This project will design a system for collecting and analyzing data for use in constructing income and product accounts for a State. An input-output flow model and a workable model for making short-term forecasts of population, labor force, and industrial employment will be developed, using Oregon as the example. Data on the rates of technological change in various industries will be used to project the size of occupational groups in order that plans for vocational education can be made. Existing analytical models and data, especially projections of industry growth made by the University's Bureau of Business and Economic Research and projections of population and labor force made by the Oregon State Board of Census, will be revised and integrated into the development of the model.

Estimated Completion Date: July 1967.

Grant No.: 91-16-66-28

Institution: Purdue Research Foundation
Lafayette, Indiana

Principal Staff: Dr. Carolyn C. Perrucci, Departments of Sociology and Engineering Administration.

Project Title: Engineers and Scientists: A Comparative Analysis of Professional Values and Behavior

Objectives and Procedures: This project will attempt to determine whether scientists and engineers are professionals, and, if so, whether they are members of the same professional group. Data already have been collected by mail questionnaires to random samples of 5,000 Purdue University alumni who graduated between 1947-64 with bachelor, master, and doctoral degrees in nine engineering sub-groups and four science

sub-groups. Analysis of the tabulated data will focus on three criteria of occupational professionalism: (1) The influence of educational background on adaptation to organizational work roles; (2) organizational career history; and (3) degree of participation in outside professional activities which provide contact with colleagues and dissemination of knowledge.

Estimated Completion Date: September 1967.

Grant No.: 91-34-66-48

Institution: University of Rochester
Rochester, New York

Principal Staff: Dr. Dean Harper, Department of Sociology.

Project Title: The Relationship of Migrant Workers' Attitudes and Behavior to Their Work Environment

Objectives and Procedures: This project will test whether migrant farmworkers raise their work standards and change their general attitudes when they are provided with opportunities for success and not subjected to exploitation. Investigation will be carried out in two different migrant labor camps—one, typically exploitative, and the other, unusually fair in giving its workers a chance to get ahead. The attitudes, motivation, and behavior of all adult workers in each camp will be ascertained through interviews at three intervals during the work season. Each worker will also provide general biographical data. Information on labor turnover, absenteeism, and earnings will be collected from the workers and the crew bosses. Analysis will be based on a comparison of workers in the two camps according to kinds of responses, degree of change in attitude and behavior over the work season, amount of labor turnover and absenteeism, and personal background data.

Estimated Completion Date: June 1967.

Grant No.: 91-25-66-04

Institution: Saint Mary's College
Winona, Minnesota

Project Title: The Role of Technical Schools in Improving the Skills and Earning Capacity of Rural Manpower: A Case Study

Principal Staff: Dr. Svetozar Pejovich.

Objectives and Procedures: This study profiles the Winona Area Technical School (WATS) in Winona, Minn., in an attempt to establish a basis for evaluating the private and social costs and returns accruing from investment in rural technical schools. Data on age, occupation, earnings before and after technical school training, and the school's annual net operating costs per student were obtained from school records and the Minnesota State Employment Office. Mail questionnaires were also sent to all full-time students who graduated between 1960 and 1965. Rates of return on investment were calculated according to the student's costs and the total costs of investment in education.

Completion Date: April 1966.

Highlights of Findings: Calculated median private rates of return on investment in technical training were above or about equal to the average rates of return an individual could expect to receive from other forms of investment. Intangible nonquantifiable benefits, such as increased confidence and the sense of accomplishment, were also evidenced. From the community's standpoint, use of the same resources elsewhere could not be expected, on the average, to provide Winona with a higher rate of return. WATS also made an important contribution to the community by supplying Winona employers with a variety of skilled labor.

Grant No.: 91-46-66-72

Institution: Sam Houston College
Huntsville, Texas

Principal Staff: Dr. George G. Killinger, Institute of Contemporary Corrections and the Behavioral Sciences.

Project Title: Job Obsolescence in the Law Enforcement and Correctional Field

Objectives and Procedures: This is an exploratory study of the educational and skill qualifications of personnel employed in law enforcement and correctional institutions. The researcher will define minimum skill requirements for these personnel and assess the extent to which law enforcement personnel in Huntsville agencies meet these skill and educational standards. Basic skill and educational requirements will be derived from the curricula of representative institutions offering courses in the field and from in-service training curricula. Evaluation of actual qualifications of present

personnel will be based on results of a questionnaire which will be constructed to determine job obsolescence by noting the discrepancy between skills considered important by respondents and those identified as basic by this study.

Estimated Completion Date: September 1967.

Grant No.: 91-15-66-34

Institution: Southern Illinois University
Carbondale, Illinois

Principal Staff: Dr. Herman R. Lantz and Dr. Ernest K. Alix, Department of Sociology.

Project Title: A Study of the Relationship Between Resignation and Job Retraining

Objectives and Procedures: This project will deal with the problem of individual resignation, a feeling that no change for the better is preferable to the disappointment that may come with efforts to change. Knowledge about the nature of resignation will aid officials who try to introduce change into the lives of unwilling people by educational and counseling programs. In particular, this study will relate an individual's feelings of resignation to participation in job retraining programs. A questionnaire will be used to obtain data from a random sample of 500 potential retrainees being tested at the West Frankfort, Ill. Demonstration Manpower Program. The dimensions of resignation will be abstracted from relevant literature and incorporated into a scale. Resignation scale scores will be matched against favorable or unfavorable response toward retraining.

Estimated Completion Date: May 1967.

Grant No.: 91-10-66-67

Institution: University of South Florida
Tampa, Florida

Principal Staff: Dale O. Cloninger, School of Business.

Project Title: A Determination of the Special Labor Force Problems Created by Significant Participation of Retirees

Objectives and Procedures: This project will consider the special employment and income problems created by substantial numbers of retirees resettling in an economically dynamic area. The researcher will seek the labor force participation rate, the extent of post retirement work activity, and the unemployment rate of those defined as the retired population. If local employment and wages are being affected by the presence in the community of a reservoir of skilled, experienced people who may frequently be willing to work for lower wages, the extent of the threat, if it exists, will be measured and means sought for alleviating adverse effects on the non-retiree labor force. Basic data will be gathered through questionnaires from a sample survey of 1,000 retired households in Pinellas County, Fla., from private and public data collection agencies, and through interviews with members of the business community.

Estimated Completion Date: July 1967.

Grant No.: 91-05-66-53

Institution: Stanford University
Stanford, California

Principal Staff: Dr. Melvin W. Reder, Department of Economics.

Project Title: International Differences in Unemployment Rates of New Entrants to the Labor Force

Objectives and Procedures: This project will consider the question of how a number of Western European countries have been able to maintain rates of unemployment consistently and appreciably lower than those of the United States over the past decade. The researcher will attempt to measure the relative importance of the lower unemployment rates of young people and recent immigrants in explaining overall differences in unemployment rates, to analyze the causes of these differences and to appraise their relative importance, and to consider the implications of the analysis for public policy. Using unemployment data for recent labor force entrants in the United States and in several Western European countries, conventional econometric techniques will be exercised to relate international and regional differences in the rates to differences in relevant economic structures and institutions.

Estimated Completion Date: January 1968.

Grant No. 91-48-66-05^{*}

Institution: The University of Vermont
Burlington, Vermont

Principal Staff: Dr. David A. LeSourd, Department
of Commerce and Economics.

Project Title: Economic Forecasting Model of the
State of Vermont

Objectives and Procedures: The primary goal of
this research project is to construct a modified input-
output model of the State of Vermont. It is expected
to yield data useful in analyzing income and employ-
ment trends, needs, and potential changes.

The procedure will involve the identification and
definition of the industrial sectors of the State for pur-
poses of this study. Data will be collected for the State
as a whole and by county on the number of firms and
their size. A stratified sample representative of the
State's economy will be devised. A questionnaire re-
questing information on sales, by markets, will be sent
to a number of firms chosen to represent the desired
sample. The output table for the State will then be
constructed, analyzed, and tested.

Estimated Completion Date: Early 1967.

Grant No.: 91-44-07

Institution: The University of Vermont
Burlington, Vermont

Principal Staff: Dr. Milton J. Nadworny, Depart-
ment of Commerce and Economics.

Project Title: The Impact of Employment Expansion
in the Burlington, Vermont, Labor Area

Objectives and Procedures: This study was de-
signed to examine the means by which relatively large
firms expand and staff their operations in a small labor
area. The project included an examination of the
effects of the expansion on employers and community
resources. It is hoped that the study will provide the
basis for recommendations concerning the minimizing

^{*} This project is being jointly sponsored by the Office of Man-
power Policy, Evaluation, and Research, U.S. Department of
Labor and the Vermont Central Planning Office, Montpelier, Vt.

of certain stresses that may be caused by employment
expansion in communities in similar situations.

Three major employers who were expanding their
operations in the Burlington, Vt., area were interviewed
about the magnitude and nature of their policies on
the recruitment and training of additional employees.
The Vermont Department of Employment Security pro-
vided information on the local manpower situation.
Other employers were interviewed to determine the im-
pact of the expansion on their operations.

Completion Date: October 1965.

Highlights of Findings: The study measured the di-
mension and likely impact of the expansion of three
manufacturing firms in the Burlington area in 1965.
The study estimated that the expansion would involve
primarily male workers who were currently employed,
and would be mainly in professional, technical and
semiskilled production jobs. Less than half (45 per-
cent) of the new workers would be drawn from com-
munities immediately surrounding the plant—the
others would either commute or move into the area.

The study also forecasted increasing shortages of
housing and school space and growing pressures for
roads, utilities and related services as a result of the
employment expansion.

Grant No.: 91-52-66-56

Institution: West Virginia University
Morgantown, West Virginia

Principal Staff: Dr. Robert W. Miller, Institute for
Labor Studies.

Project Title: Social-Psychological Factors Associ-
ated With Responses to Retraining

Objectives and Procedures: This study will probe
the apparent failure of an MDTA training program to
fulfill its basic objective of facilitating employment
among its graduates. The researcher will endeavor to
determine what attempts graduates made to locate jobs;
to describe their successes and failures; and to account
for their success or failure in terms of the nature of the
program itself, the social-psychological characteristics
of the graduate, and the social and economic character-
istics of the region. Data will be obtained from ap-
proximately 350 interviews with graduates of the pro-

gram and from discussions with the training staff and the West Virginia Departments of Employment Security and Public Welfare.

Estimated Completion Date: July 1967.

Grant No.: 91-05-66-35

Institution: Yosemite Junior College District
Modesto, California

Principal Staff: Dr. Frank C. Pearce, Director of Research.

Project Title: The Validation of a Specified Testing Program for MDTA Trainees

Objectives and Procedures: This study will assess the adequacy of selected testing programs as tools for measuring an individual's ability to benefit from a given type of vocational training and his probable success on the job. A random sample of 170 trainees at the MDTA multi-occupational project in Modesto will be assigned to three groups. Background information will be elicited from each group, and various combinations of tests will be administered at intervals to two of the groups. Scores will be used to anticipate performance in vocational training and in work for the two groups given tests, and actual performance will show the validity of the tests. Also, the third (control) group, which was treated according to questionnaire results only, will be used to estimate usefulness of the tests.

Estimated Completion Date: August 1967.

PART 6.

SELECTED LIST OF COMPLETED PROJECTS

This section lists projects completed under the Manpower Administration's research program, which was begun in 1962.

Selected List of Completed Projects

Copies of reports marked with an asterisk can be consulted at the libraries or field offices listed in Appendix A. Other reports may be available directly from the author.
Most of the projects listed are contracts. The few grants are marked with a dagger.

<i>Contractor and Principal Investigator(s)</i>	<i>Title</i>
American Association of University Women Educational Foundation DR. ELEANOR DOLAN ET AL.	Counseling Techniques for Mature Women
Auerbach Corporation RICHARD RIDALL	A Study of Manpower Requirements for Technical Information Support Personnel*
Bureau of Social Science Research, Inc. Mrs. LAURE M. SHARP	Occupational Adjustments of Recent Low-Income Southern In-Migrants to a Northern City†
California, University of E. R. F. W. CROSSMAN LOUIS E. DAVIS STEPHEN LANER	Evaluation of Changes in Skill-Profile and Job Content Due to Technological Changes: Methodology and Pilot Results from the Banking, Steel, and Aerospace Industries
California, University of MARGARET S. GORDON	Retraining and Labor Market Adjustment in Western Europe (Government Printing Office, Washington, D.C., 1966) *
Census, Bureau of the STANLEY GREENE	Labor Reserve (U.S. Census of Population, 1960, PC(2)-6c, U.S. Bureau of the Census, Washington, D.C., 1966)
Colorado, University of LESLIE FISHMAN	Methodology for Projection of Occupational Trends in the Denver Standard Metropolitan Statistical Area*
Columbia University ELI GINZBERG	The Pluralistic Economy (McGraw-Hill Book Co., New York, 1965) *
Columbia University AARON W. WARNER	Obsolescence of Scientific and Engineering Skills: A Pilot Study

<i>Contractor and Principal Investigator(s)</i>	<i>Title</i>
Denver, University of DEAN C. CODDINGTON JAMES F. MAHAR	Short-Term Impacts of Automation and Technological Change on Employment in the Power Laundry Industry*
Georgia Institute of Technology JOHN L. FULMER	Research Design to Forecast Demand for New Types of Technicians in an Industry*
Houston, University of E. E. LIEBHAFSKY	An Analysis of Forces Underlying Decisions of Potential Workers to Refrain from Labor Force Participation*
Human Sciences Research, Inc. SIDNEY FINE	The Nature of Automated Jobs and Their Educational and Training Requirements*
International Labour Organisation RALPH H. BERGMANN	International Differences in Factors Affecting Labour Mobility—Inter-Industry, Occupational, and Geographical: Selected Countries of Western Europe
International Labour Organisation KARL H. EBEL JACQUES MONAT SVEN GRABE ANGELA BUTLER	European Apprenticeship (ILO CIRF Monograph; Vol. 1, No. 2; 1966) *
International Labour Organisation MARCEL ROBERT	Health and Safety Aspects of Automation and Technological Change*
Labor Statistics, Bureau of HARRY P. COHANY	The Operation of Severance Pay Plans and Their Implications in Labor Mobility (BLS Bulletin 1462, Washington, D.C., 1965) *
Labor Statistics, Bureau of SOPHIA COOPER	Formal Occupational Training of Adult Workers (Manpower/Automation Monograph No. 2, OMPER, Washington, D.C., 1964) *
Labor Statistics, Bureau of DONALD LANDAY	Labor Mobility and Private Pension Plans (BLS Bulletin 1407, Washington, D.C., 1964) *
Labor Statistics, Bureau of DONALD LANDAY	A Study of the Effects of the Extension of Health, Welfare and Insurance Benefits on the Mobility of Laid-off Workers
Labor Statistics, Bureau of NORMAN J. SAMUELS	Pretest of a Survey of Manufacturing Employer Expenditures During 1965 for the Formal Training of Nonsupervisory Employees
Lebergott, Stanley STANLEY LEBERGOTT	Methods of Forecasting Short Term Unemployment Change*

<i>Contractor and Principal Investigator(s)</i>	<i>Title</i>
Little, Arthur D., Inc. ARTHUR A. BROWN	Analysis of Automation Potential by Means of Unit Operations*
Maryland, University of PAUL WASSERMAN MARY LEE BUNDY	Manpower Utilization and Requirements in Library and Information Service†
Massachusetts Institute of Technology ROBERT EVANS, JR. GEORGE E. DELEHANTY	Low-Wage Employment: An Inventory and an Assessment†
Michigan, University of DOROTHY H. COONS	Report of a Study Tour of European Industrial Therapy Centers*
Michigan, University of, Survey Research Center EVA MUELLER JOHN PARKER JOHN SONQUIST	Pilot Study of the Impact of Changes in Machine Technology on a Cross-Section of the Labor Force †
Minnesota, University of ELLIOT ARONSON	Annotated Bibliography of Research on Workers' Attitudes Toward Unemployment and Retraining *
Missouri, University of JOHN F. MCGOWAN	Conference on Government-University Relations in the Professional Preparation and Employment of Counselors *
National Bureau of Economic Research RICHARD A. EASTERLIN	Labor Force Trends and Projections in the United States (National Bureau of Economic Research, New York, N.Y., 1966)
National Bureau of Economic Research GEOFFREY H. MOORE	Research Conference on the Measurement and Interpretation of Job Vacancies
National Committee for Children and Youth ISABELLA J. JONES	Rural Youth in a Changing Environment (National Committee for Children and Youth, New York, N.Y., 1965) * Rural Youth in Crisis: Facts, Myths, and Social Changes*
National Opinion Research Center RICHARD JAFFE	College, Color, and Employment: Racial Differences in Postgraduate Employment Among 1964 Graduates of Louisiana College †
New York University BRUNO STEIN	Local Manpower Data Programs *
North Carolina State University at Raleigh ADGER B. CARROLL LOREN A. IHEN	Costs and Returns of Technical Education: A Pilot Study *

<i>Contractor and Principal Investigator(s)</i>	<i>Title</i>
North Carolina, University of DAVID BROWN	Placement Services for College Teachers (Vol. 1) * Academic Labor Markets (Vol. 2) *
Northeastern University DEAN S. AMMER ERNEST DECICCO MORRIS A. HOROWITZ	Mechanization and Manpower in Gray-Iron Foundries *
Northern Michigan University KENNETH L. PARKHURST	Manpower Problems and Economic Opportunities in an Adjusting Regional Economy: The Upper Peninsula of Michigan
Rutgers—The State University JACK CHERNICK	The Distinguishing Characteristics of Workers Eligible for Training Programs and Their Success or Failure in the Selection and Training Process
Saint Mary's College SVETOZAR PEJOVICH	The Role of Technical Schools in Improving the Skills and Earning Capacity of Rural Manpower: A Case Study†
South Bend Community School Corporation NATHANIEL J. PALLONE	The Educational Rehabilitation of the Hard-Core Un- employed*
Stanford Research Institute HARRY V. KINCAID	Impacts of Technological Changes in Warehousing
Stanford Research Institute GERTRUDE D. PETERSON	An Evaluation of the Concept of Trainee Camps for Unemployed Youth (Manpower/Automation Mono- graph No. 5, OMPER, Washington, D.C., 1966) *
Stanford Research Institute RICHARD S. ROBERTS	Management Decisions to Automate*
Temple University LOUIS P. HARMS	Projective Models of Employment by Industry and by Occupation for Small Areas: A Case Study*
Tuskegee Institute L. H. FOSTER	Enhancing the Occupational Outlook and Vocational Aspirations of Southern Secondary Youth
Upjohn Institute for Employment Research, The W. E. HAROLD L. SHEPPARD A. HARVEY BELITSKY	The Job Hunt: Job-Seeking Behavior of Unemployed Workers in a Local Economy*
U.S. Industries, Inc. RICHARD E. WALTHER	A Pilot Study of the Use of Area of Interest Self- Instructional Reading Courses Among Young Per- sons Considered To Be Neither Self-Motivated Nor Self-Supporting*

<i>Contractor and Principal Investigator(s)</i>	<i>Title</i>
Vermont, The University of MILTON J. NADWORNÝ	The Impact of Employment Expansion in the Burlington, Vermont, Labor Area†
Virginia State College, Norfolk Division WILLIAM F. BRAZZIEL	Factors in Workers' Decisions to Forgo Retraining Under Manpower Development and Training Act*
Vocational Guidance and Rehabilitation Services ROBERT P. OVERS	Abstracts of Sociological Literature on Occupations*
Women's Bureau Mrs. MARY DUBLIN KEYSERLING	Counseling Girls Toward New Perspectives*
Women's Bureau Mrs. MARY DUBLIN KEYSERLING	Mid-West Conference on Vocational Counseling for Girls*

APPENDIX A

DEPOSITORY LOCATIONS FOR REPORTS

Appendix A

DEPOSITORY LOCATIONS FOR REPORTS

The following libraries contain copies of research reports submitted to the U.S. Department of Labor under the contract research program of the Office of Manpower Policy, Evaluation, and Research, Manpower Administration. The libraries are subscribers to the Library of Congress' Documents Expediting Project.

Libraries

ALABAMA

Auburn University
Ralph Brown Draughon Library
Serials Department
Auburn, Ala. 36830

University of Alabama
The Library
Reference Department
University, Ala. 35486

ALASKA

University of Alaska
The Library
Government Documents Division
College, Alaska 99735

ARIZONA

Arizona State University
Matthews Library
Documents Librarian
Tempe, Ariz. 85281

University of Arizona
The Library
Acquisitions Department
Tucson, Ariz. 85721

ARKANSAS

Arkansas State College
The Library
Acquisitions Librarian
State College, Ark. 72467

CALIFORNIA

California State College at Los Angeles
John F. Kennedy Memorial Library
Documents Section
5151 State College Drive
Los Angeles, Calif. 90032

California State Library
Documents Section
Sacramento, Calif. 95809

University of California
General Library
Documents Department
Berkeley, Calif. 94720

University of California
The Library
Documents Department
Davis, Calif. 95616

University of California
The Library
Government Publications Room
Los Angeles, Calif. 90024

University of California
The Library
Documents Section
Riverside, Calif. 92502

University of California
The Library
Government Publications Department
Santa Barbara, Calif. 93106

CALIFORNIA—Continued

County of Los Angeles
Superintendent of Schools
808 North Spring Street
Los Angeles, Calif. 90015
San Diego State College
The Library
San Diego, Calif. 92115
San Fernando Valley State College
Library-Acquisitions Department
18111 Nordhoff Street
Northridge, Calif. 91324
University of Southern California
The Library
700 West 35th Place
Los Angeles, Calif. 90007

COLORADO

Colorado State University
The University Libraries
Documents Librarian
Fort Collins, Colo. 80521
University of Colorado
The University Libraries
Government Documents Division
Boulder, Colo. 80304

CONNECTICUT

University of Bridgeport
The Library
Bridgeport, Conn. 06602

DELAWARE

University of Delaware
Morris Library
Documents Department
Newark, Del. 19711

DISTRICT OF COLUMBIA

Library of Congress
Washington, D.C. 20540

FLORIDA

Florida State University
The Library
Documents Division
Tallahassee, Fla. 32306
University of Florida
The University Libraries
Documents Department
Gainesville, Fla. 32603

FLORIDA—Continued

University of South Florida
The Library
Documents Division
Tampa, Fla. 33620

GEORGIA

University of Georgia
The University Libraries
Documents Section
Athens, Ga. 30602

HAWAII

University of Hawaii
The Library
Government Documents Collection
2425 Campus Road
Honolulu, Hawaii 96822

ILLINOIS

Center for Research Libraries
5721 Cottage Grove Avenue
Chicago, Ill. 60637

University of Chicago
The Library
Documents Librarian
Chicago, Ill. 60637

Illinois State University
Milner Library
Acquisitions Department
Normal, Ill. 61761

University of Illinois
The Library
Documents Division
Urbana, Ill. 61803

Northern Illinois University
Swen Parson Library
Documents Department
DeKalb, Ill. 60115

Northwestern University
The Library
Documents Department
Evanston, Ill. 60201

Southern Illinois University
The General Library
Serials Department
Carbondale, Ill. 62903

INDIANA

Ball State University
The Library
Muncie, Ind. 47306

Indiana State Library
Documents Librarian
140 North Senate Avenue
Indianapolis, Ind. 46204

Indiana State University
Director of Libraries
Terre Haute, Ind. 47809

Indiana University
The Library
Documents Librarian
Bloomington, Ind. 47405

Purdue University
The Library
Documents Librarian
Lafayette, Ind. 47907

IOWA

State College of Iowa
Library—Serials—A
Cedar Falls, Iowa 50613

KANSAS

Kansas State University
The Library
Acquisitions
Manhattan, Kans. 66502

University of Kansas
The Library
Documents Librarian
Lawrence, Kans. 66045

KENTUCKY

University of Kentucky
The University Libraries
Continuation Division
Acquisition Department
Lexington, Ky. 40506

MAINE

University of Maine
Raymond H. Fogler Library
Documents Librarian
Orono, Maine 04473

MARYLAND

Enoch Pratt Free Library
Documents Division
Baltimore, Md. 21201

Johns Hopkins University
Library—Acquisitions
Baltimore, Md. 21218

University of Maryland
McKeldin Library
Social Science Department
College Park, Md. 20742

MASSACHUSETTS

Lesley College
Livingston Stebbins Library
Cambridge, Mass. 02138

MICHIGAN

Detroit Public Library
Book Receiving Department
5201 Woodward Avenue
Detroit, Mich. 48202

Eastern Michigan University
The Library
Ypsilanti, Mich. 48197

Michigan State University
The Library
Documents
East Lansing, Mich. 48823

University of Michigan
The Library
Documents Librarian
Ann Arbor, Mich. 48104

Wayne State University
The Library
Documents Librarian
Detroit, Mich. 48202

Western Michigan University
Dwight B. Waldo Library
Documents Library
Kalamazoo, Mich. 49001

MINNESOTA

University of Minnesota
Walter Library
Documents Division
Minneapolis, Minn. 55455

MISSISSIPPI

Mississippi State University
Mitchell Memorial Library
Acquisition Department
Serials Section
Box 1517
State College, Miss. 39762

University of Southern Mississippi
The Library
P.O. Box 53, Station A
Hattiesburg, Miss. 39401

MISSOURI

Kansas City Public Library
Documents Division
Ninth and Locust Streets
Kansas City, Mo. 64106

University of Missouri
The Library
Serials Department
Columbia, Mo. 65202

NEBRASKA

University of Nebraska
The Library
Documents Librarian
Lincoln, Nebr. 68508

NEW HAMPSHIRE

Dartmouth College
Baker Library
Reference Department
Hanover, N.H. 03755

NEW JERSEY

Princeton University
The Library
Documents Librarian
Princeton, N.J. 08540

Rutgers University
The Library
Periodical Department
New Brunswick, N.J. 08901

NEW YORK

Brooklyn College
The Library
Social Sciences and Education Divisions
Brooklyn, N.Y. 11210

NEW YORK—Continued

Brooklyn Public Library
Documents Division
Grand Army Plaza
Brooklyn, N.Y. 11238

Columbia University
The University Libraries
Documents Acquisition
535 West 114th Street
New York, N.Y. 10018

Cornell University
The University Libraries
Government Documents
Ithaca, N.Y. 14850

New York Public Library
Government Documents
Fifth Avenue and 42nd Street
New York, N.Y. 10018

New York State Library
Gift and Exchange
Albany, N.Y. 12224

State University College
Milne Library
Geneseo, N.Y. 14454

State University College
The College Library
Documents Librarian
Potsdam, N.Y. 13676

State University of New York
Agricultural and Technical College
Library-Periodical Department
Alfred, N.Y. 14802

Syracuse University
The Library
Serials Division
Syracuse, N.Y. 13210

United Nations
Dag Hammarskjöld Library
Acquisition Section
New York, N.Y. 10017

NORTH CAROLINA

Duke University
The Library
Public Documents Division
Durham, N.C. 27706

NORTH CAROLINA—Continued

North Carolina State College
D. H. Hill Library
Raleigh, N.C. 27607

University of North Carolina
The Library
BA/SS Division—Documents
Chapel Hill, N.C. 27515

OHIO

Bowling Green State University
The Library
Acquisitions Department
Bowling Green, Ohio 43402

Kent State University
The Library
Documents Librarian
Kent, Ohio 44240

Miami University
The Library
Documents Librarian
Oxford, Ohio 45056

Oberlin College
The Library
Documents Librarian
Reference Department
Oberlin, Ohio 44074

Ohio State University
The University Libraries
Documents Division
1858 Neil Avenue
Columbus, Ohio 43210

OKLAHOMA

Central State College
Max Chambers Library
Government Publications
Edmond, Okla. 73034

Oklahoma State Library
Public Documents Division
109 State Capitol
Oklahoma City, Okla. 73105

Oklahoma State University
The Library
Documents Librarian
Stillwater, Okla. 74075

OREGON

Oregon State Department of Education
Division of Education Development
302 Public Service Building
Salem, Oreg. 97310

University of Oregon
The Library
Documents Division
Eugene, Oreg. 97403

PENNSYLVANIA

American Institute for Research
410 Amberson Avenue
Pittsburgh, Pa. 15232

Carnegie Library of Pittsburgh
Reference Department
Pittsburgh, Pa. 15213

Community College of Philadelphia
The Library
34 South 11th Street
Philadelphia, Pa. 19107

Free Library of Philadelphia
Public Documents
Philadelphia, Pa. 19103

Lehigh University
The Library
Bethlehem, Pa. 18015

Pennsylvania State Library
Technical Services, Room 46
Box 1601

Harrisburg, Pa. 17126

Pennsylvania State University
The Library
Documents
University Park, Pa. 16802

RHODE ISLAND

Brown University
The University Library
Documents Division
Providence, R.I. 02912

University of Rhode Island
The Library
Kingston, R.I. 02881

TENNESSEE

Joint University Libraries
Serials and Documents
Nashville, Tenn. 37203

TENNESSEE—Continued

University of Tennessee
The Library
Documents Librarian
Knoxville, Tenn. 37916

TEXAS

Dallas Public Library
Documents Librarian
Dallas, Tex. 75201

Texas State Library
U.S. Documents Section
Drawer DD, Capital Station
Austin, Tex. 78711

UTAH

Brigham Young University
The Library
Documents Section
Provo, Utah 84601

Utah State University
The Library
Logan, Utah 84321

University of Utah
Library Periodical Room
Salt Lake City, Utah 84112

VIRGINIA

University of Virginia
Alderman Library
Public Documents
Charlottesville, Va. 22903

WASHINGTON

Washington State University
Social Science Library
Pullman, Wash. 99163

University of Washington
The Library
Documents Librarian
Seattle, Wash. 98105

WEST VIRGINIA

West Virginia University
The Library
Reference Department
Morgantown, W. Va. 26506

WISCONSIN

Milwaukee Public Library
Acquisition Division
814 Wisconsin Avenue
Milwaukee, Wis. 53233

University of Wisconsin-Milwaukee
The Library
2500 E. Kenwood Boulevard
Milwaukee, Wis. 53211

WYOMING

University of Wyoming
The Library
Documents Librarian
Laramie, Wyo. 82071

Field locations

Copies of research reports may also be consulted at the following field locations:

John F. Kennedy Federal Office Building
(BES and BLS)
Government Center
Boston, Mass. 02203

341 Ninth Avenue (BES and BLS)
New York, N.Y. 10001

301 Professional Arts Building (BES)
Chambersburg, Pa. 17201

1371 Peachtree Street NE. (BES and BLS)
Atlanta, Ga. 30309

Engineers Building, Room 202 (BES)
Cleveland, Ohio 44114

1365 Ontario Street (BLS)
Room 740
Cleveland, Ohio 44114

U.S. Courthouse and Federal Office Building
(BES and BLS)
219 South Dearborn Street
Chicago, Ill. 60604

Federal Office Building (BES)
Room 2200
911 Walnut Street
Kansas City, Mo. 64106

411 North Akard Street (BES)
Dallas, Tex. 75201

334 Equitable Building (BES)
17th and Stout Streets
Denver, Colo. 80202

450 Golden Gate Avenue (BES and BLS)
P.O. Box 36017
San Francisco, Calif. 94102

Smith Tower Building (BES)
Room 1911
Seattle, Wash. 98104

APPENDIX B

GUIDELINES FOR SUBMISSION OF CONTRACT RESEARCH PROPOSALS

Appendix B

GUIDELINES FOR SUBMISSION OF CONTRACT RESEARCH PROPOSALS

Title I of the Manpower Development and Training Act of 1962 (PL 87-415) authorizes the Secretary of Labor to "arrange . . . for the conduct of such research and investigations as give promise of furthering the objectives of this Act." Under this authority, the Department of Labor enters into contracts for the conduct of research by organizations and individuals outside the Department.

The Office of Manpower Policy, Evaluation, and Research (OMPER) has the responsibility for the conduct and coordination of research in the broad areas of manpower resources, requirements, development, utilization, mobility, and automation and technological change, for the purpose of providing information which will lead to the development of informed and responsive manpower policies and programs.

Academic institutions, State and local government organizations, and other organizations and individuals from all the social science disciplines with research capabilities in the manpower area may apply for contracts to conduct research.

It is suggested that before a detailed research proposal is developed in accordance with the following guidelines, interested researchers should submit a brief summary of their ideas. Preliminary submissions of research ideas should contain the following information in brief nontechnical language:

1. Problem to be investigated.
2. Objectives of study.
3. Procedures.
4. Time and budget requirements (summary only).

Research organizations submitting research ideas to OMPER for the first time may also wish to submit background information concerning their staff, facilities, and capabilities for research.

Based on a review of a preliminary submission, OMPER may request that a formal contract research proposal be submitted. Thirty copies of the formal proposal should then be furnished in the form outlined in the guidelines. For all funded proposals, 225 reproduced copies of the final report resulting from the research will be required.

Publications based on the research conducted under the contract will acknowledge that the research was supported by a contract from the Office of Manpower Policy, Evaluation, and Research of the U.S. Department of Labor under the Manpower Development and Training Act of 1962. The Department will have a nonexclusive right to publish and distribute the final report of the research, and to use the findings including any research designs developed by the research for any purpose whatsoever.

GUIDELINES FOR CONTRACT RESEARCH PROPOSALS UNDER THE MANPOWER DEVELOPMENT AND TRAINING ACT OF 1962, AS AMENDED

These instructions are in three parts:

- A. General instructions,
 - B. A specific outline to be used in describing the content and procedure of the research project, including personnel and facilities, and
 - C. An outline for an estimated budget.
- There is *no printed* form to be used.

A. GENERAL INSTRUCTIONS

1. Proposal Submission

The first page of the proposal must show the following information in the order indicated:

PROPOSAL SUBMITTED TO THE DIRECTOR, OFFICE OF MANPOWER POLICY, EVALUATION, AND RESEARCH, MANPOWER ADMINISTRATION, U.S. DEPARTMENT OF LABOR, FOR THE CONDUCT OF A RESEARCH PROJECT UNDER THE PROVISIONS OF TITLE I OF THE MANPOWER DEVELOPMENT AND TRAINING ACT, P.L. 87-415.

- Project title:* (Be concise, descriptive, and as specific as possible. Avoid obscure technical terms. Include key words under which project may be indexed.)
- Submitted by:* (Name of organization, institution, agency, or individual hereinafter referred to as "organization.")
- Address:* (Of organization.)
- Telephone number:* (Of organization. Include area code.)
- Initiated by:* (Full name and position of individual who is initiating project, ordinarily the director or chief investigator.)
- Transmitted by:* (Full name and position of official who is approving the submission of the proposal. This must be someone

with authority to commit the organization to the proposed project. The proposal should be signed by both the initiator and the transmitter on the original or master copy.)

Date: (Date transmitted.)

2. Mailing Address for Proposals

Send all proposals to:

Director
Office of Manpower Policy, Evaluation, and Research
Manpower Administration
U.S. Department of Labor
Washington, D.C. 20210

3. Scope and Substance of the Proposal

The initial proposal should be complete enough to communicate all the information necessary for a sound evaluation. Excessive length should be avoided. It should encompass the following:

a. Area of Study

(1) The proposed research should seek to develop new knowledge or new applications of existing knowledge which give promise of furthering the objectives of the Manpower Act. The objectives of the Manpower Act as stated in title I of the Act may be summarized as follows:

(a) To develop and apply the information and methods needed to deal with the problems of unemployment and other malutilizations of manpower resources.

(b) To accomplish technological progress while avoiding or minimizing individual hardship and widespread unemployment.

(c) To raise the skill levels of the Nation's work force, to increase the Nation's productivity, and to provide the manpower resources needed for an advancing technology.

(2) The project should be focused primarily on significant manpower problems.

(3) The anticipated results of the project should have broad national interest. Projects may be limited to special areas *only* where such studies can be shown to provide a basis for generalized conclusions, or to have application over a wide area.

(4) The project should not duplicate ongoing research; nor should it duplicate completed research the results of which provide currently valid applications.

b. Research Design

(1) The problem with which the research proposes to deal should be clearly defined.

(2) The proposal should reflect an adequate knowledge of other research related to the problem.

(3) Questions to be answered or hypotheses to be tested should be well formulated and clearly stated.

(4) The proposal should outline fully the procedures to be followed and wherever applicable, include information on such matters as sampling procedures, controls, types of data to be gathered, and statistical analyses to be made.

c. Personnel and Facilities

(1) The director or principal investigator must be someone who has pre-

viously done successful research in the area involved or who has clearly demonstrated competence for performing or directing work in that area.

(2) The organization or individual submitting the proposal must have facilities and staff available which are adequate for carrying out the research.

(3) Where applicable, as, for example, for a research proposal involving a casework study of a training program, the proposal should indicate the agreed interest and intended cooperation in the program on the part of all local agencies whose interest and cooperation are necessary for the successful accomplishment of the research project.

d. Economic Efficiency

(1) The suggested approach to the problem must be reasonable in terms of overall cost as compared with the cost of other possible approaches.

(2) The suggested approach to problems involving the analysis of statistical data must utilize, to the extent feasible, data already available or being collected through government and other sources.

(3) The total proposed expenditure must be justifiable in terms of the probable value of the results of the proposed research.

4. Preparation of Proposal Statements and Reports

Generally, initial proposals should run about 8 to 10 pages in length. More detailed and lengthier statements may be required for proposals during negotiation.

a. Number of Copies Required

Proposals should be submitted in 30 copies, typed or otherwise reproduced on white paper of standard size on one side only.

b. Submission and Review Dates

Proposals may be submitted at any time, and will be reviewed as expeditiously as possible. Acknowledgment of receipt will usually be made within 15 days. Processing, review by research specialists, and evaluations of comments received usually require 60 days from receipt of proposal.

5. Approval

Notice of approval for negotiation (or disapproval) will be given as soon as possible following review and evaluation. Final approval for contracting will depend on negotiations, and will require agreement on content, structure and budget of the project by both the organization and the Office of Manpower Policy, Evaluation, and Research, Manpower Administration.

NOTE: As required by the Office of Statistical Standards, Bureau of the Budget, any research contract entered into will include the following clause: "The Researcher shall submit to the Secretary or his designated representative copies of all proposed questionnaires and survey plans for clearance in advance of their use in accordance with the Federal Reports Act of 1942."

B. OUTLINE OF PROPOSAL CONTENT AND PROCEDURE

Follow the outline below in describing the proposed project. Identify each section by number and title as indicated in the outline.

1. Abstract

On a single, separate page submit a summary of the proposal under two main heads: (1) Objectives and (2) Procedures.

2. Problem

Give a brief statement of the problem to be investigated explaining its importance and significance in relationship to the objectives of the Manpower Act.

3. Objectives

State the hypotheses to be tested or the specific questions to be answered.

4. Relationship to Other Research

Discuss the proposed study in relation to previous or ongoing research in related areas, and indicate how the proposed study will extend the body of knowledge about the areas. Point out what will be distinctive or different about the proposed research as compared with previous research, and in what ways it may suggest or lend support to programs for action in the manpower area.

5. Procedure

Describe the procedure in detail listing the steps to be followed. Where pertinent, be sure to include specific information on each of the following:

a. Populations, Samples, Experimental and Control Groups

Indicate their origin, composition, purpose, use, numbers involved, types of data to be collected on each, sampling plans, etc.

b. Experimental Design and Methods To Be Used

c. Data

Describe types to be gathered and methods to be used. Indicate extent to which the data analyzed will be from existing sources, such as Department of Labor or Census Bureau. Describe questionnaires, interview guides, tests, and other research instruments to be used.

d. Analyses

Indicate methods of statistical and other analyses to be used in testing the hypotheses or achieving the objectives.

e. Phasing

Indicate approximate time schedule for various aspects or phases of the project.

f. Expected End Product

This should include preliminary reports of findings periodically during the course of the project, and a final report.

6. Personnel

Give name, title, and a brief statement of the research experience of the principal investigator, and of other key personnel if possible.

7. Facilities

Indicate special facilities and similar advantages, including research staff resources, available to the organization.

8. Duration

Estimate total time for the project and indicate beginning and ending dates.

9. Other Information

Indicate other information pertinent to the proposal, including the following:

a. Extent of agreed cooperation in project by agencies whose support is necessary for the successful accomplishment of objectives. Include names and titles of officials of such agencies giving assurance of cooperation. For example, in a training-research project, cooperation of the State employment security agency may be vital to the success of the project.

b. Amount of financial or other support available for this project from other sources.

c. Whether this proposal has been or will be submitted to any other agency or organization for financial support.

d. Whether this proposal is an extension of or an addition to a previous project supported by the Department of Labor or other Government agency.

e. Whether this project or a similar one was previously submitted to the Department of Labor or other Government agency.

C. BUDGET

Include a section on estimated costs of the project to be covered by contract with the Department of Labor. Start this section on a new page, identifying it in sequence with previous sections as "10. Budget."

The cost of performance of a contract includes the costs of necessary direct items of expenditure incurred in the performance of the contract; it may also include an amount for overhead or indirect costs to be determined by negotiation.

Following the categories as shown in the outline below, and rounding all amounts to the nearest dollar, list anticipated requirements for all items of expenditure. If the project is expected to extend beyond the end of the fiscal year (June 30), indicate amounts required for each year and in total.

1. Direct Costs

a. Personal Services

(1) Include salaries and wages of all personnel which are directly attributable to actual performance under this contract, whether on a full- or part-time basis. (List personnel by title, man-months, and dollar amount.)

(2) Include, in connection with the above, but identify separately, allowances for vacation, holiday, and sick-leave pay. Also include employee benefits if customarily granted.

(3) Include allowances for consultants as required.

b. Materials and Supplies

List all materials and supplies which are directly expended by the contractor in performance of the contract.

c. Travel

Include subsistence during travel, in accordance with the contractor's established policy.

d. Communications

Include telephone and telegraph charges.

e. Services

Include those not specifically covered under personal services. When a study involves securing information through Federal agencies (as U.S. Bureau of the Census) or State agencies (as State employment services), the cost of such services should be included.

f. Other

Itemize by category and amount.

2. Indirect Costs or Overhead

Include pro-rata share of administrative costs. Give basis for the determination of the proposed overhead rate and reference to other current Government contracts, if any. Overhead rates may be fixed during the negotiation of a contract, or may be determined provisionally, with final settlement made at the conclusion of the contract.

If the division between direct and indirect costs as outlined above differs from the contractor's established accounting system and procedures for allocating such costs, the contractor's system may be followed and the differences will be considered in negotiating an equitable percentage to be applied in the contract. It is most important that all items of cost be readily identifiable regardless of whether they are shown as direct or indirect.

The proposed budget will be reviewed against applicable Federal regulations as part of the initial review. Where changes are necessary for projects which are otherwise approved for negotiation, these changes, as well as decisions concerning the determination of overhead rate, will be made during the negotiation of the contract.

APPENDIX C

GUIDELINES FOR APPLICATIONS FOR GRANTS IN SUPPORT OF DOCTORAL DISSERTATIONS

Appendix C

U.S. DEPARTMENT OF LABOR
Manpower Administration
Office of Manpower Policy,
Evaluation, and Research

DL-MT-241
Budget Bureau No. 44-R1297.1
Approval Expires Dec. 31, 1970

GUIDELINES FOR DOCTORAL DISSERTATION GRANTS UNDER THE MANPOWER DEVELOPMENT AND TRAINING ACT OF 1962, AS AMENDED

Academic institutions offering doctoral degrees in areas of study which relate to the manpower field (such as economics, sociology, psychology, education, and the behavioral sciences generally) may apply for grants to support dissertation research of graduate students who have completed all requirements for the doctoral degree except the doctoral dissertation, or who will have met these requirements before the grant is effective. A separate application must be submitted for each candidate nominated by the university for a grant. Such a grant will be made to the university in the name of the candidate.

GRANT CONDITIONS

The maximum amount of direct costs (see "The Application," paragraph 5.a below) of any one grant is \$10,000 for a period not to exceed 1 year. For projects scheduled to require more than 1 year, support may be given through renewals of grants for a total of not to exceed 3 years, subject to availability of appropriated funds, receipt of progress reports showing reasonable progress, and requests for such renewals to be submitted not later than 1 month before the expiration of previous grants. The initial grant will indicate the period for which the Department intends to support the project.

The grant may cover the following costs:

1. Support for the doctoral candidate. This will be on a stipend basis, determined by the proportion of time spent by the candidate on his dissertation times the following full-time annual stipend rates:

Single individual.....	\$4,000
Married, no children.....	4,500
Married, one or more children.....	5,000

Thus, for example, a married man with children who teaches half time and works on his dissertation half time for 9 months of the year, and devotes full time to his dissertation the other 3 months could received a stipend of \$3,125

(three-fourths year at half time, \$1,875, plus one-fourth year at full time, \$1,250).

However, a candidate who has been regularly employed in teaching or research activities by the sponsoring university or a related research organization, and for whom the dissertation research requires relief from part or all of his employment, may be supported at his established rate of pay, prorated for the proportion of his time devoted to the dissertation.

2. Direct project costs, such as clerical assistance, necessary travel and supplies.

3. Indirect costs at a fixed rate not to exceed the established audited rate of the institution. The stipend may be treated as a personnel cost for the purpose of computing the amount of indirect costs.

In accordance with the Bureau of the Budget Circular No. A-74, dated December 13, 1965: "Participation in the costs of research supported by Federal grants," the grantee institution must share in the total cost of the project on "more than a token basis."

For applications which are approved, five copies of the final report resulting from the research will be required. For projects extending beyond 1 year, each renewal will be considered as a separate grant, and a progress report will be required with the request for renewal.

Any survey plans, surveys, or questionnaires arising from the research under an approved grant will be identified solely as the responsibility of the university or the doctoral candidate, and will in no way be attributed to the Department of Labor.

Publications based on the research conducted under the grant will acknowledge that the research was supported by a grant from the Office of Manpower Policy, Evaluation, and Research, Manpower Administration of the U.S. Department of Labor under the Manpower Development and Training Act of 1962, as amended.

The standard conditions applying to all dissertation grants are appended as "Conditions Governing Grants in Support of Doctoral Dissertations" at the end of these Guidelines. As indicated below, any desired exceptions from these conditions should be stated with the transmittal of the application.

SUBMISSION OF APPLICATIONS

Fifteen copies of each application should be sent by the university to:

Director
Office of Manpower Policy, Evaluation, and Research
Manpower Administration
U.S. Department of Labor
Washington, D.C. 20210

Closing dates for applications are January 1, April 1, July 1, and October 1. Applications will be accepted which are postmarked or delivered on or before each of these dates for work to be conducted or initiated during the 1-year period following the date of the application. However, applications received in OMPER one week or more after a closing date, regardless of postmark, will be considered at the next scheduled closing date. Processing of applications requires approximately 2 months, including evaluation by review panels. Applicants may expect to be notified of action taken about 2 months after the applicable closing date. Applications approved for

funding may be activated for work to begin approximately 1 month after notification. A grant approved for a candidate who has not completed all the requirements for the doctoral degree at the date of the application will require notice from the university that all requirements have been met before any payments will be made under the grant.

CRITERIA FOR APPROVAL

All applications are reviewed by a panel of persons from outside the Department with expertise in the manpower field. Only those applications which propose studies which have relevance to the objectives of Title I of the Manpower Development and Training Act are referred to the panel for their consideration and recommendation.

The panel considers all elements of an application in its review, giving primary emphasis to the candidate's ability, originality, and creativity as evidenced by the project proposal. The standing of the candidate and his proposed project relative to other candidates and to the availability of funds for the program determines whether the project will be approved for a grant. Approval may be conditional on acceptance of changes as recommended by the review panel, including substantive and budget revisions.

THE APPLICATION

Applications should contain the information requested below in the order indicated. There is no printed form to be used.

1. The first page should show the following:

PROPOSAL SUBMITTED TO THE DIRECTOR, OFFICE OF MANPOWER POLICY, EVALUATION, AND RESEARCH, MANPOWER ADMINISTRATION, U.S. DEPARTMENT OF LABOR, FOR A GRANT IN SUPPORT OF A DOCTORAL DISSERTATION UNDER THE PROVISIONS OF TITLE I OF THE MANPOWER DEVELOPMENT AND TRAINING ACT, PL 87-415, AS AMENDED.

Submitted by: (Legal name of university which will be used if grant is approved, and department sponsoring the candidate.)

Address: (Of university.)

Candidate: (Name, address and telephone number. Candidate should sign original or master copy.)

Project title: (Concise, descriptive and as specific as possible.)

Sponsor: (Name, position, and phone number of university advisor or sponsor of the candidate. Sponsor should sign original or master copy.)

Transmitted by: (Name, position and phone number of approving official. This should be someone with authority to commit the university, and he should sign the original or master copy. Unless otherwise indicated, all correspondence, including the Notice of Grant if approved, will be addressed to this official.)

Date: (Date transmitted.)

2. The background of the candidate. Include statement of education and employment experience, and a list of published work.

3. A statement by the candidate's sponsor on the interests and potential of the candidate.

4. A brief description of the proposed work (generally, but not necessarily about three pages in length) prepared by the candidate, and covering:

- a. The problem to be investigated.
- b. The objectives of the study.
- c. Procedures to be used. Include, as appropriate, general design, population and sample, data to be gathered and methods, and methods of analysis.
- d. A time schedule for the project. This may extend beyond the 1-year limit on the initial grant as a basis for additional grants.
- e. Where support of other agencies is necessary for the successful completion of the objectives of this study, include a statement of the extent of cooperation already assured by such agencies.

5. A budget statement, in detail for the current year, with tentative totals for additional years, if any. Detailed budgets will be required as part of each renewal application. Items to be shown in detailed budgets are listed below. Dollar amounts are to be listed in two columns: One, amounts of funds requested, and two, amounts of the grantee institution's contribution from non-Federal funds.

a. Direct Costs.

(1) Personal services.

(a) Show the portion of the candidate's time to be spent on the project and the rate of pay. If the rate is different from the stipend rate stated earlier in these guidelines, indicate the basis for the recommended rate.

(b) Include clerical or secretarial help attributable to the project.

(c) Include employee benefits to extent customarily provided by the university.

(2) Materials and supplies.

(3) Travel, including subsistence in accordance with the university's established policy but not to exceed \$16 per diem.

(4) Communications and services not included elsewhere.

(5) Other direct costs. Itemize by category and amount. Tuition and fees normally paid to the institution by doctoral candidates working only on their dissertations may be shown as a contribution of the institution in lieu of personal and other services covered by such tuition and fees (as for example, the time spent by the candidate's sponsor supervising the work of the candidate). Such tuition and fees are allowable as part of the grant amount only to the extent that they reflect grantee costs directly attributable to the work of the candidate.

b. Indirect Costs. A fixed rate which does not exceed the grantee institution's established audited rate may be used.

6. A statement acknowledging that the Conditions Governing MDTA Grants in Support of Doctoral Dissertations (which follow immediately) have been reviewed and will be accepted if the grant is approved. Any provisions from which the institution desires exception should be clearly indicated and justified.

CONDITIONS GOVERNING GRANTS IN SUPPORT OF DOCTORAL DISSERTATIONS (PURSUANT TO U.S. CODE 2572)

The Grant is subject to the conditions listed below and any special conditions which may be attached.¹

1. APPLICABILITY OF CONDITIONS

These conditions will be applicable to the Grantee, the Doctoral Candidate and to any agency or organization which, pursuant to an agreement with the Grantee, undertakes responsibility for any part of the approved dissertation research project (hereinafter called "project").

2. AMOUNT OF GRANT

The amount of the Federal Grant shall not exceed the smaller of (1) the dollar amount shown in the Notice of Grant Award or (2) the amount of cash expenditures made by the Grantee for project purposes during the Grant Period. For this purpose, the amount of cash expenditures shall include only expenses which are chargeable to the budget of the Grantee and which are allowable costs under the applicable provisions of 1-15.3 of the Federal Procurement Regulations (41 CFR 1-15.3).

3. PAYMENTS

The Government will advance an amount equal to 90 percent of the total amount of the Grant up to a maximum advance of \$9,000. Within 90 days after the work under the Grant has been completed, Grantee shall submit a final fiscal report accounting for all expenditures under the Grant. Upon acceptance by the Office of Manpower Policy, Evaluation, and Research (OMPER) of this report, together with all other reports required by these conditions, the Government will make final payment.

4. USE OF GRANT FUNDS

Grant funds shall be expended only for the purposes and activities of the project. Expenses which are attributable only in part to this project shall be prorated on a reasonable and consistent basis to determine the amount chargeable to the activities supported by this Grant.

5. CONFORMITY WITH BUDGET

Adjustments within the approved budget may be made by the Doctoral Candidate, with the approval of the Grantee, provided the total expenditures do not exceed the amount of the Grant and the stipend to be paid the Doctoral Candidate is not increased.

6. OBLIGATION OF GRANT FUNDS

Grant funds may not be obligated prior to or after the Grant Period. Obligations outstanding as of the end of the Grant Period may be liquidated (paid out) after the end of the Grant Period. Such obligations shall involve only specific commitments for which a need existed in the Grant Period and which are supported by approved contracts, purchase orders or requisitions, invoices or bills, or

¹ Exceptions to these conditions should be requested in cases where compliance with one or more of them would cause unnecessary difficulties in carrying out the approved project. A waiver of any condition must be in writing and must be signed by an authorized representative of OMPER. Any such waiver must be explicit; no waiver may be inferred from the fact that the Grant is responsive to an application which may have contained material inconsistent with one or more of these conditions.

other evidence of liability consistent with the Grantee's purchasing procedures, and for which the goods or services have been received or rendered within the Grant Period. All obligations incurred in a given Grant Period shall be liquidated within 3 calendar months after the end of the Grant Period.

7. UNOBLIGATED FUNDS

Funds remaining unobligated at the end of the Grant Period cannot be transferred to another Grant. The amount of the free or unobligated balance remaining at the end of the Grant Period shall be returned to OMPER when the final financial report for the Grant Period is submitted. If savings occur in the liquidation of obligations outstanding at the end of the Grant Period, these become part of the unobligated balance.

8. TRAVEL EXPENSES

Expenses charged for travel shall not exceed those allowable under the customary practice of the Grantee.

9. EXPENSES DISALLOWED

No Grant funds shall be extended for:

- (a) the purchase of real property;
- (b) the purchase of personal property at prices exceeding \$250 per item, without prior written approval of OMPER;
- (c) the cost of meals for employees or officials of the Grantee except when in travel status;
- (d) costs incurred before or after the Grant Period; or
- (e) costs not allowable under the applicable provisions of subpart 1-15.3 of the Federal Procurement Regulations (41 CFR 1-15.3).

10. ACCOUNTING FOR PROPERTY

Upon completion of the project, the Grantee will make a report to OMPER itemizing all nonconsumable property purchased with Grant funds. OMPER at that time will determine the disposition to be made of such property, except that title to property acquired with Grant funds which costs \$250 per item or less shall vest in the Grantee.

11. REVOCATION

The Director of OMPER may revoke this grant in whole or in part for cause. Cause shall include the following: (1) improper use of Grant funds, (2) failure by the Grantee or the Doctoral Candidate to comply with either these conditions or the terms of the project proposal, (3) submittal by the Grantee to OMPER of reports which are incorrect or incomplete in any material respect, or (4) inability of the Doctoral Candidate to continue to work on the project. In the event of revocation of this Grant, the Grantee shall cancel its outstanding commitments hereunder covering the procurement of material, supplies, equipment, and miscellaneous items, and, shall submit a report covering the activities, findings, and, if any, the conclusions and recommendations resulting from the project work to the date of revocation. In addition, the Grantee shall exercise all reasonable diligence to accomplish the cancellation or diversion of its outstanding commitments covering personal services and extending beyond the date of such revocation. Finally, the Grantee shall refund to OMPER any unexpended Grant funds, except that revocation shall not affect any amount obligated by the Grantee prior to receiving notice of the revocation.

12. INTEREST EARNED ON FEDERAL FUNDS

All interest earned on Federal funds shall be reported on the financial report for the Grant Period and shall be returned by check payable to the U.S. Treasury.

13. REPORTS

Prior to the end of the Grant Period, Grantee will submit a final report, including five (5) copies of the Dissertation, covering the activities, implications, conclusions, and recommendations resulting from the project work. Said final report and Dissertation shall contain, either in the preface or on the title page, the following acknowledgement:

"The material in this project was prepared under a Grant from the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, under the authority of Title I of the Manpower Development and Training Act of 1962. Researchers undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the Department of Labor."

14. RIGHTS TO AND DISPOSITION OF DATA

The Grantee or the Doctoral Candidate may publish results of the project without prior review by OMPER, provided that such publications acknowledge (a) that the project was supported by a grant from the U.S. Department of Labor, Office of Manpower Policy, Evaluation, and Research pursuant to the provisions of the Manpower Development and Training Act of 1962, and (b) that "Reproduction in whole or in part is permitted for any purpose of the United States Government." Grantee agrees to furnish five copies of each such publication to OMPER. The Government may, to the extent that the Grantee has the power to grant such rights, duplicate, use, and disclose in any manner and for any purpose whatsoever, and have others so do, all data procured or reports delivered under this Grant. It is understood that the Grantee has no right to disclose material of a confidential nature to the Government even though such material has been collected in the performance of this Grant. If the Grant results in a book or other copyrightable material, the author is free to copyright the work, but OMPER reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, all copyrighted material and all material which can be copyrighted resulting from this Grant. It is further agreed that in any material prepared under this Grant under which a license is reserved to the Government under the preceding sentence, the following language shall be added plainly in the vicinity of the copyright: "Reproduction by the United States Government in whole or in part is permitted for any purpose."

15. RECORDS AND ACCOUNTS

The Grantee shall maintain such records and accounts, including property, personnel, financial records and equal opportunity, as may be required by the Director of OMPER to assure a proper accounting for all Grant funds. Grantee shall keep records which shall reflect its actual contribution to the project, and, as required by the Bureau of the Budget Circular A-74 (12/13/65), it shall not be less in proportion to the total actual charges against the Grant than the ratio indicated in the approved budget. Grantee agrees to make available, for audit purposes, all records required under this clause to OMPER or the Comptroller General of the United States or his authorized representative, and to retain them for three years after the expiration of the Grant, unless permission to destroy them is granted by the Director of OMPER. If requested

by the Government, the Grantee will furnish the Director of OMPER prior to the receipt of any Federal funds, an opinion of a Certified Public Accountant indicating that the Grantee has an accounting system which is adequate for the purposes of this Grant.

16. COVENANT AGAINST CONTINGENT FEES

The Grantee warrants that no person or selling agency or other organization has been employed or retained to solicit or secure this Grant upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee. For breach or violation of this warrant the Government shall have the right to revoke this Grant without liability, or, in its discretion, to deduct from the award or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

17. OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Grant, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Grant if made with a corporation for its general benefit.

18. OTHER GOVERNMENT FUNDS

The Grantee represents that no funds other than those awarded under this Grant have been received from the Federal Government in payment for any of the activities financed by funds awarded under this Grant. If any such funds are hereafter received, the Grantee agrees to disclose the fact and return them to the Government.

19. DISCLAIMER OF LIABILITY

The project supported by this Grant is that of the Grantee and not the Federal Government which assumes no liability with respect to accidents, illnesses, or claims arising out of the Grant. Accordingly, the Grantee is advised to take such steps to insure or protect itself as it may deem desirable.

20. QUESTIONNAIRE APPROVAL

No questionnaire or survey plan shall be identified as a government study or government approved study unless the Grantee submits to the Director of OMPER copies of said questionnaires and survey plans for clearance in advance of use in accordance with the Federal Reports Act of 1942.

21. EQUAL OPPORTUNITY

This Grant is subject to Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the regulations of the Secretary of Labor issued thereunder which are found at 29 Code of Federal Regulations, Part 31. Grantee assures that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the proceeds of, or be subject to discrimination under the project supported by this Grant. During the period of this Grant the Grantee assures that neither it nor any other employer performing work under the Grant will discriminate against any employee or applicant for employment because of race, creed, color, or national origin, and will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. For breach or violation of this assurance, the Government shall have the right to revoke this Grant without liability, or, in its discretion, seek its judicial enforcement.

APPENDIX D

GUIDELINES FOR APPLICATIONS FOR GRANTS IN SUPPORT OF RESEARCH PROJECTS

Appendix D

U.S. DEPARTMENT OF LABOR
Manpower Administration
Office of Manpower Policy,
Evaluation, and Research

DL-MT-242
Budget Bureau No. 44-R1296.1
Approval Expires Dec. 31, 1970

GUIDELINES FOR RESEARCH GRANTS UNDER THE MANPOWER DEVELOP- MENT AND TRAINING ACT OF 1962, AS AMENDED

Public and private nonprofit academic institutions and research organizations, and individual researchers associated with such institutions or organizations, may apply for grants to support research projects or research-related activities in the manpower field.

Projects approvable under this program include:

1. Research which explores new fields of inquiry.
2. Research which explores new methods of approach to existing fields of inquiry.
3. Studies which test the effectiveness or feasibility of research projects or programs.
4. Syntheses of the current state of knowledge in various research areas in order to provide guides for future programs.

In addition, grants may be made in special circumstances to assist the support of research projects underwritten by other agencies, but which require additional monies to assure completion.

GRANT CONDITIONS

The maximum amount of direct cost (see "The Application," paragraph 10.a. below) of any one grant is \$10,000 for a period not to exceed 1 year. For projects scheduled for more than 1 year, additional grants, each within the same limitation, may be made for a total of not to exceed 3 years, subject to availability of appropriated funds, receipt of progress reports showing reasonable progress, and requests for such renewals to be submitted not later than 1 month before the expiration of previous grants. The initial grant will indicate the period for which the Department intends to support the project.

Grant funds may be expended only for the purpose of carrying out the research program as approved. In accordance with the Bureau of the Budget Circular No. A-74 dated December 13, 1965, "Participation in the costs of research supported by Federal grants," the grantee institution must share in the total cost of the project on "more than a token basis."

All grant awards are subject to the condition that the principal investigator designated in the application continues to be responsible for the conduct of the approved project for its duration. Continuation of grants in the event the principal investigator becomes unavailable will be contingent upon written approval by the Department of the person chosen by the grantee to replace the principal investigator.

For applications which are approved, five reproduced copies of the final report resulting from the research will be required. For projects extending beyond 1 year, each renewal will be considered as a separate grant, and a progress report will be required with the request for renewal.

Any survey plans, surveys, or questionnaires arising from the research under an approved grant will be identified solely as the responsibility of the grantee, and will in no way be attributed to the Department of Labor.

Publications based on the research conducted under the grant will acknowledge that the research was supported by a grant from the Office of Manpower Policy, Evaluation, and Research, Manpower Administration, of the U.S. Department of Labor under the Manpower Development and Training Act of 1962, as amended. The Department will have a nonexclusive right to publish and distribute the final report of the research, and to use the findings, including any research designs developed by the research, for any purpose whatsoever.

The standard conditions applying to all research grants are appended as "Conditions Governing Grants in Support of Research Projects," at the end of these Guidelines. As indicated below, any desired exceptions from these conditions should be stated with the transmittal of the application.

CRITERIA FOR APPROVAL

A primary consideration in the approval of any grant request is the relevance of the area of study to the objectives of Title I of the Manpower Development and Training Act. Proposals which are determined to be relevant to the objectives of the Manpower Development and Training Act will be considered by a review panel of persons from outside the Department with expertise in the manpower field and approved or disapproved in relation to criteria such as the following:

1. Manpower Significance

- a. The project is focused primarily on significant manpower problems.
- b. The anticipated results or methodology of the project have broad national interest. Projects limited to special areas provide a basis for generalized conclusions, or have application over a wide area.

2. Research Design

- a. The problem with which the research proposes to deal is clearly defined.
- b. The proposal reflects an adequate knowledge of other research related to the problem.
- c. Questions to be answered or hypotheses to be tested are well formulated and clearly stated.
- d. The proposal outlines fully the procedures to be followed, and wherever applicable, includes information on such matters as sampling procedures including the size of the population to be studied and the size of sample and control groups, as well as types of data to be gathered, and statistical analysis to be made.

3. Personnel and Facilities

- a. The experience and training of the principal investigator appear adequate to carry out the research.

b. The facilities available to the investigator(s) are adequate to carry out the research.

c. The plan provides, wherever feasible, for encouraging and increasing knowledge and skills of professional personnel and of new research workers.

4. Economic Efficiency

a. The suggested approach to the problem is reasonable in terms of overall cost as compared with the cost of other possible approaches.

b. The suggested approach to problems involving the analysis of statistical data utilizes, to the extent feasible, data already available or being collected through Government and other sources.

c. The total proposed expenditure is justifiable in terms of the probable value of the results of the proposed research, and the grantee institution is contributing a reasonable share of the total cost.

Approval may be conditional on acceptance of changes in the project or the budget, or both, as recommended by the review panel.

GRANT REVISIONS

The terms of any approved grant will be revised only if major changes in the areas to be investigated are agreed to be necessary. Changes in the research approach suggested by the development of a project or to expedite the achievement of its objectives, but which do not materially change the scope and purpose of the study, may be made at the discretion of the grantee. Adjustments within the estimated approved budget may be made at the discretion of the grantee if the total amount of the grant and the total pay and rate of pay of the principal investigator(s) are not increased.

Prior written approval of the Department is required for:

1. Substantial changes in the scope or purpose of a study, with or without changes in the budget;
2. Any increase in the total budget for a grant; or
3. Any increase in the total pay or rate of pay of the principal investigator(s).

SUBMISSION OF APPLICATIONS

Fifteen copies of each application should be sent to:

Director
Office of Manpower Policy, Evaluation, and Research
Manpower Administration
U.S. Department of Labor
Washington, D.C. 20210

Closing dates for applications are January 1, April 1, July 1, and October 1. Applications will be accepted which are postmarked or delivered on or before each of these dates for work scheduled to start 3 months or more following the applicable closing date. However, applications received 1 week or more after a closing date, regardless of postmark, will be considered at the next scheduled closing date. Processing of applications requires approximately 2 months, including evaluation by review panels. Applicants may expect to be notified of action taken about 2 months after the closing date. Applications approved for funding may be activated for work to begin approximately 1 month after notification.

THE APPLICATION

Applications should contain the information requested in the order indicated. There is no printed form to be used.

1. The first page should show the following:

PROPOSAL SUBMITTED TO THE DIRECTOR, OFFICE OF MAN-POWER POLICY, EVALUATION, AND RESEARCH, MANPOWER ADMINISTRATION, U.S. DEPARTMENT OF LABOR, FOR A GRANT IN SUPPORT OF A RESEARCH PROJECT UNDER THE PROVISIONS OF TITLE I OF THE MANPOWER DEVELOPMENT AND TRAINING ACT, P.L. 87-415, AS AMENDED.

Project title: (Be concise, descriptive, and as specific as possible. Include key words under which project may be indexed.)

Submitted by: (Legal name of institution or organization which will be used if grant is approved, hereinafter referred to as "organization.")

Address: (Of organization.)

Telephone number: (Of organization. Include area code.)

Principal Investigator: (Full name and position of the principal investigator.)

Transmitted by: (Full name and position of official who is approving the submission of the proposal. This must be someone with authority to commit the organization to the proposed project. Unless otherwise indicated, all correspondence, including the Notice of Grant, if approved, will be addressed to this official.)

(The proposal should be signed by both the principal investigator and the transmitter on the original or master copy.)

Date: (Date transmitted.)

2. Abstract. On a single, separate page submit a summary of the proposal including (a) Title of project, (b) Name of organization, (c) Name of principal investigator, (d) Objectives, (e) Procedures, (f) Time schedule, i.e., beginning and ending dates (first year total and project total if longer than 1 year).

3. Problem. Give a brief statement of the problem to be investigated, explaining its importance and significance.

4. Objectives. State the objectives of the research project, including hypotheses to be tested and specific questions to which answers will be sought. For research design studies, include the ultimate objectives of the research to be designed.

5. Relationship to other research. Cite or summarize pertinent research related to the proposed study. Present the rationale upon which the proposal is based. Indicate the uniqueness of the proposal.

6. Procedure. Describe the procedure in detail listing the steps to be followed. Include specific information on each of the following, as appropriate:

- a. General design of project.
- b. Population and sample to be studied.
- c. Data to be gathered and methods to be used.
- d. Methods of analysis to be used.
- e. Time schedule indicating length of time required for each major phase of the study.

7. Personnel. Give name, title, and a brief statement of the research experience of the principal investigator, and of other key personnel.

8. Facilities. Indicate special facilities and similar advantages, including research staff resources, available to the organization.

9. Other information. Indicate other information pertinent to the proposal, including the following:

- a. Amount of financial or other support for this project from other sources.
- b. Whether this proposal has been or will be submitted to any other agency or organization for financial support.
- c. Whether this proposal is an extension of or an addition to a previous project supported by the Department of Labor or other Government agency.
- d. Whether this proposal or a similar one was previously submitted to the Department of Labor or other Government agency.
- e. Extent to which cooperation has been agreed to by agencies whose support is necessary for the successful completion of the objectives of the proposal.

10. Budget. Include a section on estimated costs of the project to be covered by the grant and by the grantee institution from non-Federal sources. Start this section on a new page.

The cost of the project includes the costs of necessary direct items of expenditures incurred in its performance; it may also include an amount of overhead or indirect costs at a rate which does not exceed the grantee institution's established audited rate for such projects.

Following the categories as shown in the outline below, and rounding all amounts to the nearest dollar, list anticipated requirements for all items of expenditure in two columns: One, amount of funds requested, and two, amounts of the grantee institution's contribution from non-Federal funds. If the project is expected to extend beyond 1 year, indicate amounts required for each year and in total.

a. Direct Costs.

(1) Personal Services. Include:

(a) Salaries and wages of all personnel which are directly attributable to actual performance under this grant, whether on a full- or part-time basis. (List personnel by title, man-months, and dollar amounts.)

(b) In connection with the above, but identify separately, allowances for vacation, holiday, and sick-leave pay. Also include employee benefits to extent customarily provided by organization.

(c) Consultants as required.

(2) **Materials and Supplies.** List all materials and supplies which are to be directly expended in performance of the contract.

(3) **Travel.** Include subsistence during travel, in accordance with the grantee's established policy, but not to exceed \$16 per diem.

(4) **Communications.** Include telephone and telegraph charges, unless these are included in indirect costs.

(5) **Services.** Include those not specifically covered under personal services.

(6) **Other.** Itemize by category and amount.

b. Indirect Costs or Overhead.

A fixed rate which does not exceed the grantee institution's established audited rate may be used.

The proposed budget will be reviewed against applicable Federal regulations, such as Bureau of the Budget Circular No. A-21, as part of the review of the proposal. Where changes are necessary for projects which are otherwise approved, final approval will be conditional on the acceptance of these changes.

11. A statement acknowledging that the Conditions Governing Grants in Support of Research Projects (which follow immediately) have been reviewed and will be accepted if the grant is approved. If there are any provisions from which the organization desires exceptions, these should be clearly indicated and justified.

CONDITIONS GOVERNING GRANTS IN SUPPORT OF RESEARCH PROJECTS UNDER SECTION 102(5) OF THE MANPOWER DEVELOPMENT AND TRAINING ACT OF 1962 (42 U.S. CODE 2572)

The Grant is subject to the conditions listed below and any special conditions which may be attached.¹

1. APPLICABILITY OF CONDITIONS

These conditions will be applicable to the Grantee, and to any agency or organization which, pursuant to a contract, agreement, or other arrangement with the Grantee, undertakes responsibility for any part of the approved research project (hereinafter called "project").

2. AMOUNT OF GRANT

The amount of the Federal Grant shall not exceed the smaller of (1) the "total amount of this grant" shown in the Notice of Grant Award or (2) the amount of cash expenditures made by the Grantee for project purposes during the Grant Period. For this purpose, the amount of cash expenditures shall include only expenses which are chargeable to the budget of the Grantee (other than Grantee contributions) and

¹ Exceptions to these conditions should be requested in cases where compliance with one or more of them would cause unnecessary difficulties in carrying out the approved project. A waiver of any condition must be in writing and must be signed by an authorized representative of OMPER. Any such waiver must be explicit; no waiver may be inferred from the fact that the Grant is responsive to an application which may have contained material inconsistent with one or more of these conditions.

which are allowable costs under the applicable provisions of subpart 1-15.3 of the Federal Procurement Regulations (41 CFR 1-15.3).

3. PAYMENTS

The Government will advance an amount equal to 90 percent of the total amount of the Grant up to a maximum of \$9,000. Within 90 days after the work under the Grant has been completed, Grantee shall submit a final fiscal report accounting for all expenditures under the Grant. Upon acceptance by the Office of Manpower Policy, Evaluation, and Research (OMPER) of this report, together with all other reports required by these conditions, the Government will make final payment.

4. USE OF GRANT FUNDS

Grant funds shall be expended only for the purposes and activities of the project. Expenses which are attributable only in part to this project shall be prorated on a reasonable and consistent basis to determine the amount chargeable to the activities supported by this Grant.

5. CONFORMITY WITH BUDGET

Adjustments within the approved budget may be made by the Grantee, provided the total expenditures do not exceed the amount of the Grant and the total pay and rate of pay of the principal investigator are not increased.

6. OBLIGATION OF GRANT FUNDS

Grant funds may not be obligated prior to or after the Grant Period. Obligations outstanding as of the end of the Grant Period may be liquidated (paid out) after the end of the Grant Period. Such obligations shall involve only specific commitments for which a need existed in the Grant Period and which are supported by approved contracts, purchase orders or requisitions, invoices, or bills, or other evidence of liability consistent with the Grantee's purchasing procedures, and for which the goods or services have been received or rendered within the Grant Period. All obligations incurred in the Grant Period shall be liquidated within 3 calendar months after the end of the Grant Period.

7. UNOBLIGATED FUNDS

Funds remaining unobligated at the end of a Grant Period cannot be transferred to another grant. The amount of the free or unobligated balance remaining at the end of the Grant Period shall be returned to OMPER when the final financial report for the Grant Period is submitted. If savings occur in the liquidation of obligations outstanding at the end of the Grant Period, these become part of the unobligated balance.

8. TRAVEL EXPENSES

Expenses charged for travel shall be governed by the following: (1) local travel by public carrier at actual costs, by privately-owned automobile at the Grantee's usual rate but not to exceed standard Government limitations plus parking fees; (2) out-of-town travel at the actual costs of first-class rail or coach air fare, plus actual costs of subsistence but not to exceed \$16 per day.

9. EXPENSES DISALLOWED

No Grant funds shall be expended for:

- (a) the purchase of real property;
- (b) the purchase of personal property at prices exceeding \$250 per item, without prior written approval of OMPER;

- (c) the cost of meals for employees or officials of the Grantee, except when in travel status;
- (d) costs incurred before or after the Grant Period; or
- (e) costs not allowable under the applicable provisions of subpart 1-15.3 of the Federal Procurement Regulations (41 CFR 1-15.3).

10. ACCOUNTING FOR PROPERTY

Upon completion of the project, the Grantee will make a report to OMPER itemizing all nonconsumable property purchased with Grant funds. OMPER at that time will determine the disposition to be made of such property, except that title to property acquired with Grant funds which costs \$250 per item or less shall vest in the Grantee.

11. REVOCATION

The Director of OMPER may revoke this grant in whole or in part for cause. Cause shall include the following: (1) improper use of Grant funds, (2) failure by the Grantee to comply with either these conditions or the terms of the project proposal, (3) submittal by the Grantee to OMPER of reports which are incorrect or incomplete in any material respect, or (4) inability or unwillingness of the Principal Investigator to continue work on the project. The Director of OMPER may also revoke this Grant if the Grantee should find itself unable or unwilling to accept upon notification by the Government any additional conditions that may be provided by law or by Executive Order. In the event of revocation of this Grant, the Grantee shall cancel its outstanding commitments hereunder covering the procurement of materials, supplies, equipment, and miscellaneous items, and shall submit a report covering the activities, findings, and, if any, the conclusions and recommendations resulting from the project work to the date of revocation. In addition, the Grantee shall exercise all reasonable diligence to accomplish the cancellation or diversion of its outstanding commitments covering personal services and extending beyond the date of such revocation. Finally, the Grantee shall refund to OMPER any unexpended Grant funds, except that revocation shall not affect any amount obligated by the Grantee prior to receiving notice of the revocation.

12. INTEREST EARNED ON FEDERAL FUNDS

All interest earned on Federal Grant funds shall be reported on the financial report for the Grant Period and shall be returned by check payable to the U.S. Treasury.

13. REPORTS

Prior to the end of the Grant Period, Grantee shall submit five copies of a final research report covering the activities, research findings, implications, conclusions, and recommendations resulting from the project work. Said final report shall contain, either in the preface or on the title page, the following acknowledgement:

"The material in this project was prepared under a Grant from the Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, under the authority of Title I of the Manpower Development and Training Act of 1962. Researchers undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the Department of Labor."

14. RIGHTS TO AND DISPOSITION OF DATA

The Grantee may publish results of the project without prior review by OMPER, provided that such publications acknowledge (a) that the project was supported by a Grant from the U.S. Department of Labor, Office of Manpower Policy, Evaluation, and Research pursuant to the provisions of the Manpower Development and Training

Act of 1962, and (b) that reproduction by the United States Government in whole or in part is permitted for any purpose. Grantee agrees to furnish five copies of each such publication to OMPER. The Government may, to the extent that the Grantee has the power to grant such rights, duplicate, use, and disclose in any manner and for any purpose whatsoever, and have others so do, all data procured or reports delivered under this Grant. It is understood that the Grantee has no right to disclose material of a confidential nature to the Government even though such material has been collected in the performance of this Grant. If the Grant results in a book or other copyrightable material, the author is free to copyright the work, but OMPER reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, all copyrighted material and all material which can be copyrighted resulting from this Grant. It is further agreed that in any material prepared under this Grant under which a license is reserved to the Government under the preceding sentence, the following language shall be added plainly in the vicinity of the copyright: "Reproduction by the United States Government in whole or in part is permitted for any purpose."

15. RECORDS AND ACCOUNTS

The Grantee shall maintain such records and accounts, including property, personnel, financial records and equal opportunity, as may be required by the Director of OMPER to assure a proper accounting for all Grant funds. Grantee shall keep records which shall reflect its actual contribution to the project, and as required by the Bureau of the Budget Circular A-74 (12/13/65), it shall not be less in proportion to the total actual charges against the Grant than the ratio indicated in the approved Budget. Grantee agrees to make available, for audit purposes, all records required under this clause to OMPER or the Comptroller General of the United States or his authorized representative, and to retain them for three years after the expiration of this Grant, unless permission to destroy them is granted by the Director of OMPER. If requested by the Government, the Grantee will furnish the Director of OMPER prior to the receipt of any Federal funds, an opinion of a Certified Public Accountant indicating that the Grantee has an accounting system which is adequate for the purposes of this Grant.

16. COVENANT AGAINST CONTINGENT FEES

The Grantee warrants that no person or selling agency or other organization has been employed or retained to solicit or secure this Grant upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee. For breach or violation of this warrant, the Government shall have the right to revoke this Grant without liability or, in its discretion, to deduct from the award, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

17. OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Grant, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Grant if made with a corporation for its general benefit.

18. GRATUITIES

The Government, may, by written notice to the Grantee, revoke this Grant if it is found, after notice and hearing, by the Secretary or his duly authorized representative, that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Grantee, or any agent or representative of the Grantee, to any officer or employee of the Government with a view toward securing this Grant: PROVIDED, that the exist-

ence of the facts upon which the Secretary or his duly authorized representative makes such findings shall be in issue and may be reviewed in any competent court.

19. OTHER GOVERNMENT FUNDS

The Grantee represents that no funds other than those awarded under this Grant have been received from the Federal Government in payment for any of the activities financed by funds awarded under this Grant. If any such funds are hereafter received, the Grantee agrees to disclose the fact and return them to the Government.

20. DISCLAIMER OF LIABILITY

The project supported by this Grant is that of the Grantee and not the Federal Government which assumes no liability with respect to accidents, illnesses, or claims arising out of the Grant. Accordingly, the Grantee is advised to take such steps to insure or protect itself as it may deem desirable.

21. QUESTIONNAIRE APPROVAL

No questionnaire or survey plan shall be identified as a Government study or Government approved study unless the Grantee submits to the Director of OMPER copies of said questionnaires and survey plans for clearance in advance of use in accordance with the Federal Reports Act of 1942.

22. EQUAL OPPORTUNITY

During its conduct of this project, the Grantee agrees as follows:

- (1) The Grantee will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Grantee will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Grantee agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by OMPER setting forth the provisions of this nondiscrimination clause.
- (2) The Grantee will, in all solicitations or advertisements for employees placed by or in behalf of the Grantee, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
- (3) The Grantee will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice, to be provided by OMPER, advising the labor union or workers' representative of the Grantee's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Grantee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor, U.S. Department of Labor (hereinafter called "Secretary").
- (5) The Grantee will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary, or pursuant thereto, and will permit access to his books, records, and accounts by OMPER and the Secretary for purposes of

investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Grantee's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this Grant may be revoked in whole or in part and the Grantee may be declared ineligible for further Government contracts or grants in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary, or as otherwise provided by law.

(7) The Grantee will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Grantee will take such action with respect to any subcontract or purchase order as the Department of Labor may direct as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the Grantee becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department of Labor, the Grantee may request the United States to enter into such litigation to protect the interests of the United States.

23. GOVERNMENT PROPERTY

Title to all property furnished by the Government shall remain in the Government. Title to all property purchased with Grant funds shall pass to and vest in the Government upon delivery of such property by the vendor. Title to Government property shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such Government property or any part thereof, be or become a fixture or lose its identity as personalty by reason of affixation to any realty.

24. PRINCIPAL INVESTIGATOR

The availability of the services of the person named in the Notice of Grant as "principal investigator" is one of the conditions of the Grant. Grantee agrees to inform the Government immediately whenever it appears to be impossible for him to continue to work on the project as planned. Under such circumstances the Grant may be revoked unless a substitute, to be approved by OMPER, is found.

APPENDIX E

MEMBERSHIP OF THE SUBCOMMITTEE ON RESEARCH OF THE NATIONAL MANPOWER ADVISORY COMMITTEE

Appendix E

U.S. DEPARTMENTS OF LABOR AND HEALTH, EDUCATION, AND WELFARE National Manpower Advisory Committee, Washington, D.C.

SUBCOMMITTEE ON RESEARCH

Membership

Dr. Richard A. Lester, Chairman
Chairman, Department of Economics
Princeton University
Princeton, N.J.

Dr. C. E. Bishop
Head, Department of Agricultural Economics
North Carolina State University
Raleigh, N.C.

James R. Bright
Professor of Business Administration
Harvard Business School
Boston, Mass.

Dr. Rupert N. Evans
Dean, College of Education
University of Illinois
Urbana, Ill.

Robben W. Fleming
Chancellor, University of Wisconsin
Madison, Wis.

Marvin Friedman
Economist, Department of Research
AFL-CIO
Washington, D.C.

Dr. Eli Ginzberg (Ex Officio Member)
Chairman of National Manpower Advisory
Committee
Director of Conservation of Human Resources
Columbia University, New York, N.Y.

Dr. Charles C. Killingsworth
Professor of Industrial and Labor Relations
Michigan State University
East Lansing, Mich.

Dr. Hylan G. Lewis
Professor of Sociology
Howard University
Washington, D.C.

Dr. William H. Miernyk
Director, Regional Research Institute
West Virginia University
Morgantown, W. Va.

Dr. Nevitt Sanford
Professor of Psychology
Institute for Study of Human Relations
Stanford University
Stanford, Calif.

Mitchell Sviridoff
Executive Director, Community Progress, Inc.
New Haven, Conn.

Dr. William Foote Whyte
Professor of Industrial Relations
New York State School of Industrial
and Labor Relations
Cornell University
Ithaca, N.Y.

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Office of Manpower Policy, Evaluation, and Research
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